

# 글로벌금융중심지로서 부산의 경쟁력과 과제

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## 요약 (Executive Summary)

### 1. 연구 배경

영국 런던에 소재한 금융부문 컨설팅 전문회사인 Z/Yen Group\* (이하 “Z/Yen”)은 세계 각지에 소재한 금융중심지의 경쟁력을 측정하는 데 있어 상당한 전문성을 보유하고 있다. 동사가 개발한 글로벌금융중심지지수(Global Financial Centres Index ; 이하 “GFCI”)는 2007년 1월 런던도시공사(City of London Corporation)에 의해 처음 공표된 이후 총 14차례 산출되어 발표되었으며, 그간 관련 전문기관, 조사기관 및 각국 주요도시 자치단체 등이 해당 지역 금융서비스 산업의 경쟁력을 측정하는 중요하고 신뢰받는 벤치마크로 자리매김하였다.

이에 따라 한국은행 부산본부와 부산경제진흥원(부산국제금융도시추진센터)은 Z/Yen과 공동으로 GFCI 산출을 위해 수집한 데이터와 지역내 자료 등을 활용하여 금융서비스 부문에서 부산의 국제적 경쟁력을 평가하였다. 부산이 아직 GFCI에 등재되지 않은 점을 고려하여 동지수 산출시 상당한 비중을 차지하는 서베이는 실시하지 않았으며 GFCI의 다른 한 축을 이루는 각종 평가지표(instrumental factors)들을 중심으로 분석을 실시하였다.

### 2. 연구 방법

GFCI 산출에 활용되는 지표로 동 연구에 사용된 지표들은 다음과 같이 크게 5가지 항목으로 분류할 수 있다.

- ① 영업환경 : Economist Intelligence Unit (이하 “EIU”)의 영업리스크 평가(Operational Risk Rating), World Bank의 영업환경평가(Ease of Doing Business), Transparency International의 부패지수(Corruption Perceptions Index) 등
- ② 도시인프라 : Cushman & Wakefield사의 사무공간평가(Office Space), EIU의 사무전자화역량평가(E-Readiness) 등

- ③ 금융부문 발전도 : 증권거래 관련 지표, World Bank의 은행부문 국내신용(Domestic Credit Provided by Banking Sector) 평가, Milken Institute의 자본접근성(Capital Access)지수 등
- ④ 인적자본 : World Bank의 사회과학, 경영 및 법률 분야 대학졸업자수, UN의 인적자원개발지수(Human Development Index), Mercer HR社의 삶의 질(Quality of Life) 등
- ⑤ 평판 : World Economic Forum(이하 “WEF”)의 글로벌경쟁력지수(Global Competitiveness Index), EIU의 국제혁신도시지수(Innovation Cities Global Index), UN의 외국인직접투자(FDI Inflows) 평가 등

동 연구에서 부산의 비교대상(peer group)으로는 아래와 같이 9개 도시를 선정하여 분석하였다.

- ① 서울 : 우리나라의 수도이자 중심도시
- ② 동경 : 일본의 수도로 동아시아지역에서 가장 발달한 도시중 하나
- ③ 오사카 : 일본의 제2금융중심지
- ④ 북경 : 동아시아의 경제대국으로 부상중인 중국의 수도
- ⑤ 상하이 : 중국에서 가장 발전가능성이 높은 금융중심지
- ⑥ 홍콩 : 아시아지역에서 GFCI 순위가 가장 높은 도시
- ⑦ 심천 : 중국의 신흥 금융중심지
- ⑧ 싱가포르 : 아시아지역에서 GFCI 순위가 두 번째로 높은 도시
- ⑨ 오슬로 : 항만을 보유한 유럽의 신흥 금융중심지

위 도시간 비교분석에는 GFCI 산출에 활용되는 세부지표(instrumental factors) 약 100개중 최종 GFCI 점수와 상관관계가 큰 40개 지표가 주로 사용되었으며, 여타 지표에서도 부산이 언급된 경우 최대한 활용하였다. 각 지표별로 부산과 여타 도시들을 비교하여 부산의 특징과 강점(strengths) 및 약점(weaknesses) 등을 분석하였으며, 정책적 노력을 통해 개선 가능한 지표들을 제시하고 전략적 우선과제들을 도출하였다.

### 3. 연구 결과

#### (종합비교)

각 세부지표별로 부산을 비교대상도시들과 단순비교한 결과는 아래와 같다. 부산은 중국의 심천, 북경, 상해에 비해서는 우위를 보인 지표가 많으나 여타 도시들에 비해서는 열위를 나타낸 지표가 많았다.

#### GFCI 세부지표별 부산-Peer Group간 단순비교평가 결과

단위 : 개

경쟁도시		부 산		A-B
		우위지표 수 (A)	열위지표 수 (B)	
중 국	심 천	14	9	5
중 국	북 경	13	8	5
중 국	상 해	13	10	3
일 본	오사카	11	12	-1
한 국	서 울	0	5	-5
일 본	동 경	9	15	-6
노르웨이	오슬로	7	17	-10
중 국	홍 콩	4	19	-15
싱가포르		4	20	-16

한편, 각 세부지표별로 GFCI와의 상관계수( $R^2$ )에 따라 가중치를 부여하여 비교한 결과에서는 부산이 타도시에 비해 대체로 상관계수가 낮은 지표에서 우위를 보이는 것으로 나타났다.

#### GFCI 세부지표별 상관계수에 따른 가중치를 부여한 비교평가 결과

단위 : 개

경쟁도시		부 산		A-B
		우위지표 수 (A)	열위지표 수 (B)	
중 국	심 천	17.7	19.3	-1.6
중 국	북 경	16.5	10.4	6.1
중 국	상 해	15.3	24.7	-9.4
일 본	오사카	13.7	22.1	-8.4
한 국	서 울	0.0	13.0	-13.0
일 본	동 경	11.3	28.6	-17.3
노르웨이	오슬로	8.7	23.2	-14.5
중 국	홍 콩	0.0	37.6	-37.6
싱가포르		3.6	33.4	-29.8

한편 한 국가에 복수의 금융중심지가 조성된 사례들이 많으며 제2금융중심지도 자산관리(wealth management), 보험(insurance), 선박금융(maritime finance) 등 특화를 통해 성공한 사례들이 많아 국내 경쟁도시인 서울의 존재를 부산의 약점으로 단정할 필요는 없는 것으로 보인다.

### 〈한 국가내 복수금융중심지 사례〉

- 런던 & 에든버러 (영국)
- 취리히 & 제네바 (스위스)
- 동경 & 오사카 (일본)
- 상파울루 & 리우데자네이루 (브라질)
- 프랑크푸르트 & 뮌헨 (독일)
- 뉴욕 등 6개 도시 (미국)
- 토론토 등 4개 도시 (캐나다)
- 상해 등 5개 도시 (중국)

### (부산의 강점)

부산의 주요 강점은 우수한 IT기반 및 인프라, 비교적 낮은 수준의 주택임차료와 서비스가격, 부산이 소재한 우리나라의 안정적인 거시경제 환경, 증권거래소의 부산 소재 등으로 분석되었다.

#### ① 활발한 기술 도입 및 활용

기술 도입 및 활용에 있어 부산을 포함한 우리나라는 산업전반에 걸쳐 충분한 기술적 역량을 보유하고 이를 매우 잘 활용하고 있는 국가로 평가된다. 특히 정보통신기술의 발달은 점차 국제화되는 금융서비스산업에서 생산성 및 효율성을 높이는 데 있어 유용한 강점이다.

#### ② 우수한 도시인프라

부산의 도시인프라는 대부분 지표에서 세계적 수준(world class)으로 평가된다. 또한 우수한 도시인프라는 경제의 효율과 삶의 질을 높이는 데 기여하여 현대적(modern)이고 발전되고(developed) 활력 있는(vibrant) 금융중심지로 발전하는 데 중요한 전제조건으로 볼 수 있다. 아울러 부산이 타도시에 비해 환경이 비교적 덜 오염됐고 기후조건이 좋은 점도 강점으로 분석된다. 다만 EIU는 부산이 실물자본(physical capital) 부문이 상대적으로 취약하여 추가적인 개선 여지가 있는 것으로 평가하고 있다.

### ③ 낮은 물가수준

서울의 강점중 하나는 여타 비교대상도시에 비해 물가수준이 낮은 점인데, 부산은 증권거래소가 소재해 있고 세계적 수준의 도시인프라 및 IT 역량을 갖춘 가운데서도 서울보다 사무실임대료 등 각종 서비스비용이 저렴하여 금융서비스 기업에 매력적인 여건을 갖추고 있다. 부산의 사무실임대료는 서울의 약 40% 수준에 불과하며, 부산국제금융센터(BIFC) 건물의 신축이 완료되면 뛰어난 사무공간 (office space)도 늘어날 것으로 보인다.

### ④ 안정적인 거시경제환경

도시의 경쟁력을 높이기 위해서는 안정적인 거시경제환경이 뒷받침되어야 하며 이는 다양한 투자자들의 입장에서 중요한 고려요소다. 부산이 속한 한국은 비교적 선진국이면서 안정적인 거시경제환경을 보유하고 있으며, S&P, WEF, EIU 등이 발표하는 영업리스크 지표 등에서도 긍정적으로 평가되고 있다.

### ⑤ 세계적인 증권거래소 보유

부산은 세계적 수준의 증권거래소를 보유하고 있으며, 광범위(broad)하고 규모가 큰 자본시장은 국제금융중심지로 발돋움하기 위한 필수요소다. 세계거래소연맹(World Federation of Stock Exchanges)에서 집계하는 거래소 관련 각종 지표에서도 부산과 한국거래소가 높은 평가를 받고 있다. 또한 한국거래소에서 거래되는 증권의 시가총액(capitalization)은 비교대상도시에 소재한 거래소보다 낮은 것으로 나타나 향후 확대될 여지가 있는 것으로 보인다. 아울러 한국예탁결제원, 한국자산관리공사, 주택금융공사 등 다수의 공공금융기관들이 향후 부산으로 추가 이전할 예정인 점도 긍정적인 요소다.

## (부산의 약점)

우리나라의 낮은 경제개방도, 경직된 노동시장 및 고급인력 부족, 전반적인 규제 및 정치 환경 등은 부산의 약점으로 나타났으며, 특히 부산이 보유한 경쟁력에 비해 국제적인 인지도가 매우 낮은 것으로 평가되었다.

#### ① 낮은 국제적 인지도

세계 주요도시에 대한 각종 평가에서 부산이 제외된 점은 부산의 국제적 인지도가 낮음을 시사하

며, 이로 인해 부산이 가진 다양한 강점들이 부각되지 못하는 것으로 나타났다. 특히 부산은 도시이미지 평가(Global Cities Image), 글로벌도시영향력 순위(Global Power Cities), 사무실비용(Office Occupation Costs), 세계주요관광도시 순위(World's Top Tourism Destinations), 도시별 물가수준(Price Level) 등의 지표에 등재될 경우 긍정적인 평가를 받을 가능성이 높아 보인다.

## ② 제조업 위주의 GDP 구성

부산경제는 제조업의 비중이 높고 다양성이 부족하며 상업 및 금융서비스가 차지하는 비중도 타도시에 비해 매우 낮다. 부산이 속한 한국경제는 OECD, IMF 및 World Bank 등에 의해 선진(developed)경제로 분류되나, 부산의 GDP 구성은 신흥시장국 유형을 나타내고 있으며 중국 홍콩에 인접한 제조업중심지 심천과 매우 유사하다. 상위 10개 금융중심지의 경우 상업 및 금융업 비중이 매우 높은 것으로 나타난다. 한편 부산은 울산, 창원 등 대규모 공업도시들이 인접해 있어 선박금융 등 금융서비스에 대한 잠재적 수요는 매우 높은 것으로 보인다.

## ③ 낮은 경제개방도 및 외국인직접투자

한국은 기술발전도는 높으나 개방도는 비교적 낮은 국가로 분류된다. 경제의 개방도가 높아지면 지역내 기업들은 대외경쟁에 직면하게 되지만 보다 넓은 시장과 상품을 접하게 되어 경쟁력을 높이는 계기로도 작용하며, 이는 경쟁력 제고와 지속적인 성장을 함께 달성하는 데 필요한 중요한 요소다. EIU의 글로벌인재 평가(Global Talent Index), WEF의 글로벌교역환경보고서(Global Enabling Trade Report), INSEAD 경영대학원의 글로벌혁신지수(Global Innovation Index) 등에서 한국의 낮은 개방도를 약점으로 지목하고 있다.

## ④ 경직된 노동시장

경직된 노동시장은 경쟁력을 약화시키는 요인이며, 높은 단위노동비용은 결국 고통을 수반하는 구조조정으로 이어지게 된다. WEF 및 EIU의 영업리스크 평가 등에서 한국의 노동시장 경직성이 약점으로 지목되고 있다.

## ⑤ 규제 및 정치 환경

WEF는 글로벌 IT부문 평가, 국가경쟁력 평가 및 교역환경보고서에서, EIU는 IT산업 관련 영업환경 평가 및 영업리스크 평가에서, INSEAD는 글로벌혁신지수에서 한국의 전반적인 규제 및 정치 환경을 약점으로 지목하고 있으며, 이는 여타 부문 지표에도 부정적인 영향을 미치고 있는 것으로 보인다.



## **(강점과 약점이 혼재된 부문)**

부산의 교육 및 인적자본, 혁신 역량, 지역경제의 규모 및 잠재력, 제도적 기반 등은 긍정적 요인과 부정적 요인이 혼재되어 강점과 약점중 어느 하나로 분류하기 어려운 것으로 나타났다.

### **① 교육 및 인적자본**

금융과 같이 부가가치가 높은 산업일수록 복잡한 업무를 처리할 고급인력을 필요로 하므로 이에 필요한 인적자본의 확보는 매우 중요한 과제다. WEF의 국가경쟁력 평가 등에서는 한국의 교육 및 인적자본을 긍정적으로 평가한 반면 EIU의 글로벌도시경쟁력지수(Global City Competitiveness Index) 등은 동 분야를 약점으로 지목하고 있다. 아울러 WEF의 글로벌 IT부문 평가와 EIU의 글로벌인재 평가, INSEAD의 글로벌혁신지수 등에서는 전반적인 교육환경은 부정적으로 평가하면서도 인적자원의 질과 기술교육 수준은 높이 평가하고 있다. EIU가 글로벌도시경쟁력지수를 통해 부산이 보유한 인적자본의 경쟁력을 낮게 평가한 점은 우려되는 부분이며, 부산이 타도시에 비해 인구구성 및 문화적 측면에서 다양성이 부족하고 외국인이 생활하기에 불편한 도시로 인식되어 있는 점도 국제도시 육성에 장애요인으로 나타났다.

### **② 혁신환경**

선진국의 가장 두드러진 특징중 하나는 혁신이 지속적으로 이루어지는 지식기반 사회라는 점이며, 혁신은 경쟁력을 높이고 우수한 인재의 유치 및 인지도 향상에도 기여한다. WEF의 국가경쟁력 평가 중 IT부문 평가와 INSEAD의 글로벌혁신지수중 기술개발실적(technology outputs) 및 경영고도화수준(business sophistication) 등의 항목에서 부산의 혁신환경이 우수한 것으로 평가된 반면, 2ThinkNow社의 관련지표와 INSEAD의 기술협력(innovation linkages)부문 평가에서는 부정적인 평가를 받고 있다.

### **③ 지역경제의 규모와 잠재력**

Brookings Institution 등은 부산경제의 견조한 성장세를 긍정적으로 평가하고 있으나 EIU의 글로벌도시경제력 평가(Global City economic strength)에서 지적된 부산의 지속적인 인구감소 문제 등은 부산경제의 성장잠재력 약화를 초래하고 있다. 또한 부산경제는 한국의 GDP에서 상당한 비중을 차지하고 있어 지자체 및 시민단체 등이 중앙정부에 정치적인 영향력을 어느 정도 발휘할 수 있을 것으로 보이나, 서울과 비교하면 미미한 수준이다. 한편, 제조업을 중심으로 한 부산의 산업구조는 긍정적으로 볼 때 향후 고부가가치·저노동집약 산업으로의 전환 가능성을 시사하기도 하며, 이는 인구감소 문제를 고려할 때 매우 절실한 과제다.

#### ④ 제도적 기반

우수한 제도적 기반은 잘 갖추어진 인프라처럼 경제의 생산성을 높이고 기업의 효율을 높이는 데 필요한 환경을 제공하여 소프트인프라(soft infrastructure)라고도 불린다. 이러한 제도적 기반은 규제 및 정치 환경의 영향을 많이 받는다. S&P의 국가별 은행산업리스크 평가(Banking Industry Country Risk Assessment ; BICRA)와 WEF의 국가경쟁력 평가 및 자본접근성지수 등에서는 한국의 제도적 기반이 약한 것으로 평가된 반면, WEF의 글로벌교역환경보고서중 통관 및 입출국 절차 등 (border procedure efficiency) 관련 내용에서는 한국의 관련제도를 높이 평가하였으며, EIU의 Institutional Effectiveness에서 부산의 제도적 기반을 높이 평가한 것도 특징적이다.

#### ⑤ 글로벌도시로서의 매력(Global Appeal)

EIU는 글로벌도시경쟁력지수중 글로벌도시로서의 매력(Global City Appeal)이 부족한 점을 부산의 약점으로 평가한 가운데 부산의 사회·문화적 특성은 비교적 우수한 것으로 평가하고 있다. 부산은 국제적인 인지도가 서울에 비해 낮고 동 부문에서 부산에 대한 평가지표가 거의 없으나 인재와 기업을 끌어들이기 위한 여러 가지 매력을 보유한 것으로 보인다.

### 글로벌금융중심지로서 부산의 강점과 약점

강 점	약 점	강점/약점이 혼재된 부문
기술 도입 및 활용	국제적 인지도	교육 및 인적자본
도시인프라	GDP 구성	혁신 환경
물가수준	경제개방도	경제규모 및 잠재력
거시경제환경	노동시장	글로벌도시로서의 매력
금융기관 유치	규제 및 정치 환경	제도적 기반

## **(정책 과제)**

국제경쟁력 향상을 위한 부산의 핵심과제로는 부산의 국제적 인지도 향상을 위한 적극적인 마케팅 및 홍보, 정보통신기술 및 관련인프라의 지속적인 개선, 인적자원 개발과 혁신역량 강화를 위한 과감한 투자, 각종 제도와 행정의 투명성 및 효율성 개선, 외국인직접투자의 적극적인 유치 등을 통한 경제의 개방도 확대 등을 들 수 있다.

### **① 부산의 국제적 인지도 향상을 위한 적극적인 마케팅 및 홍보**

부산의 국제적 인지도 향상을 위해서는 국제적으로 실시되는 각종 서베이 및 언론보도 등에 부산을 최대한 노출시켜 부산이 보유한 강점들을 적극적으로 홍보하고 국제컨퍼런스, 박람회 및 전시회 등을 적극적으로 개최함으로써 외국기업을 유치하고 부산을 국제적인 비즈니스의 장으로 조성해 나가야 할 것이다. 한편, 국제컨벤션 개최 건수 기준으로 볼 때 부산은 이미 세계적인 도시이며, 유럽이나 북미 지역에 많이 알려지는 않은 도시중에는 최고 수준의 발전여건을 보유(best endowed)하고 있는 것으로 보인다. 또한 부산은 세계 5위 규모의 컨테이너항만과 편리한 생활환경을 보유하고 있으며 서울에서 항공편으로 불과 1시간 거리에 위치해 있다.

### **② 교육 및 인적자본 개발, 혁신역량 강화를 위한 과감한 투자**

한국은 세계 500위 이내 대학을 총 11개 보유하고 있는데, 그중 부산대학교를 제외한 나머지 대학들은 모두 서울 등 부산 이외 지역에 소재하고 있다. 부산의 경우 인적자본 개발 및 혁신이 특히 중요한 이유는 다음과 같다. 우선 부산이 속한 한국은 비교적 선진경제로서 앞으로 인구전망이 밝지 않아 향후 지식 및 혁신에 크게 의존할 수밖에 없다. 특히 한국거래소 소재지이자 항만 요충지로서 향후 상업 및 금융 서비스 부문의 확대를 기대하는 부산으로서는 인적자본 기반을 확충해 나갈 필요성이 더 크다고 할 수 있다. 또한 금융과 혁신의 결합은 기업가정신(entrepreneurship)을 발현시킬 수 있으며, 이로 인해 창출된 일자리가 도시의 인지도 및 매력(attractiveness)을 높이면 추가적으로 금융 및 인적자본이 유입되는 선순환도 기대해 볼 수 있다. 아울러 교육 및 혁신 허브의 육성은 ‘부산 브랜드’의 차별화 측면에서도 훌륭한 전략이다. 대외적으로 서울은 정치, 상업, 공업 등 거의 모든 분야에서 한국의 상징으로 인식되고 있다. 따라서 제2의 도시인 부산은 차별화 및 인지도 향상을 위해 지역의 강점과 특수성을 최대한 활용할 필요가 있으며, 교육, 혁신 및 고도기술 허브 육성이 좋은 목표가 될 수 있을 것이다.

### **③ 정보통신기술 및 관련인프라의 지속적인 개선**

대부분 서베이 결과에서 한국은 세계적인 인프라를 보유하고 기술개발 및 IT 도입 수준도 높은 것

으로 나타나고 있다. 국제적인 금융센터와 항만은 우수한 교통, 에너지, 정보통신기술 인프라를 필요로 하며, 이는 경제의 생산성 제고, 혁신의 촉진, 기업가정신의 확대 및 경영고도화 등을 위한 필수요건이기도 하다. 한편, 부산의 국제공항은 규모 및 시설 면에서 다소 부족하여 많은 외국인들이 서울을 경유하여 부산을 방문하는 실정이다.

④ 간결하고 효율적인 제도적인 기반을 마련

한국은 대외적으로 제도적 환경이 특별히 우수한 것으로 평가되지는 않지만, 이는 역량부족보다는 정책적 문제에 기인하는 것으로 보인다. EIU가 부산의 가장 큰 강점중 하나로 효과적인 제도적 기반을 지목하고 있는 점은 주목할 만하며, 이는 국제금융센터 및 비즈니스의 장으로 성장해 나가기 위한 필수요건인 동시에 국내외 비즈니스의 유인을 위한 수단이기도 하다.

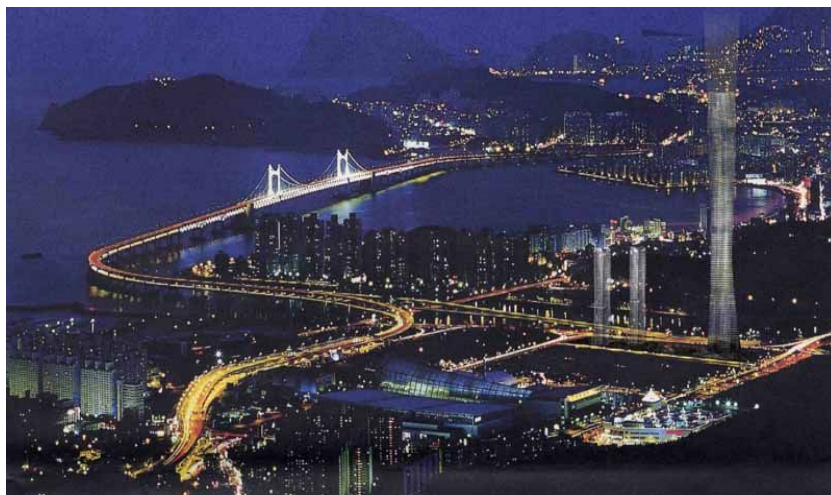
⑤ 범국가적 경제개방 확대를 위해 노력

범국가적인 경제개방도 확대는 부산으로서도 바람직한 목표다. 이는 한국에 대한 외부로부터의 관심이 커지고 경쟁이 유발되면 기업들이 결국 서울보다 더 좋은 환경을 찾아 나서게 될 것이기 때문이다. 무엇보다도 개방적이고 외국인에 호의적인 도시라는 명성을 쌓아나가는 것이 중요하다.

부산금융중심지의 경쟁력 강화를 위한 부문별 과제

지자체	중앙정부	민간부문
부산 브랜드 개발	경제개방과 대외경쟁 및 교역 확대	자본시장과 긴밀한 연계
교육, 혁신 및 인적자본에 대한 투자	공공서비스 및 정부정책 개선	산학협력 확대
인프라 및 기술 개발	규제정비	부산 브랜드 개발
제도개선	노동시장 유연성 확대	R&D 및 혁신

## Busan International Financial Centre



### Busan's Position in the Global Financial Centres Index

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## 1. EXECUTIVE SUMMARY

Z/Yen Group Limited has substantial background in measuring the competitiveness of financial centres around the world. The Global Financial Centres Index (GFCI) developed by Z/Yen and first published by the City of London in January 2007 has recently issued its 14<sup>th</sup> edition, sponsored by the Qatar Financial Centre Authority. Over the years the study has become an increasingly important and respected yardstick that various professional bodies, research institutions and city authorities across the world use to benchmark the competitiveness of cities with regard to the financial services industry.

The Bank of Korea and the Busan Economic Promotion Agency asked Z/Yen to engage in a collaborative research to analyse the competitiveness of Busan with regard to the financial services industry, mainly by using the data Z/Yen has collected in constructing the GFCI. As Busan is not yet listed in the GFCI, we used the information contained in the instrumental factors used in the GFCI model. The instrumental factors are split into 5 broad categories:

- ◆ Business environment – includes measures such as Operational Risk Rating developed by the Economist Intelligence Unit (EIU), Ease of Doing Business developed by the World Bank and the Corruption Perceptions Index by Transparency International;
- ◆ Infrastructure – includes measure such as Office Space by Cushman & Wakefield, E-Readiness by EIU;
- ◆ Financial Sector Development – includes a number of stock exchange measures, Domestic Credit Provided by Banking Sector by the World Bank and the Capital Access by the Milken Institute;
- ◆ Human Capital – includes measures such as Graduates in Social Science, Business and Law by the World Bank, the Human Development Index by the United Nations and Quality of Life by Mercer HR;
- ◆ Reputational Factors– includes broader measures like the Global Competitiveness Index by the World Economic Forum, Innovation Cities Global Index by EIU and FDI inflows by the United Nations.

We selected a group of financial centres to act as a comparison to Busan (the peer group), which are included within the GFCI:

Seoul – the main city and capital of South Korea.

Tokyo –the capital of Japan, the other major developed economy in the Far East;

Osaka – a secondary financial centre in Japan, which makes it comparable to Busan;

Beijing – the capital of China, the largest economy in the Far East;

Shanghai – the most prospective Chinese financial centre;

Hong Kong – GFCI's most highly rated financial centre in the Far East;

Shenzhen – a secondary financial centre in China;

Singapore – GFCI's second most highly rated financial centre in the Far East;

Oslo – a secondary European financial centre and a sea port, which makes it a close European counterpart of Busan.

We set out to establish the instrumental factors that have the most significant correlation with the final GFCI score –we use this as a simple way of measuring the factors’ relevance to GFCI end result. We then:

- ◆ analysed Busan’s and its peer group performance in the 40 most relevant instrumental factors as well as in several others – these additional factors are wholly relevant to Busan and its peer group as they are city-based and provide important insights;
- ◆ established traits where Busan’s (or Korea’s where country-based) performance is strong and where improvements are needed;
- ◆ provided summary tables of Busan and the peer group’s relative performance in each factor and an opinion as to whether this factor is influenceable to policymakers within the public or private sector;
- ◆ identified Busan’s strengths, weaknesses and ambivalent traits that cannot be safely categorised as either;
- ◆ from the strengths and weaknesses we recommend a brief set of strategic priorities that are shown by our analysis to be the focus for policy makers.

Busan’s performance in the instrumental factors can be summarised:

Busan is:	ranked lower in	ranked higher in	Difference (Higher – Lower)
Shenzhen	9 factors	14 factors	5
Beijing	8 factors	13 factors	5
Shanghai	10 factors	13 factors	3
Osaka	12 factors	11 factors	-1
Seoul	5 factors	0 factors	-5
Tokyo	15 factors	9 factors	-6
Oslo	17 factors	7 factors	-10
Hong Kong	19 factors	4 factors	-15
Singapore	20 factors	4 factors	-16

If the factors are weighted by the strength of their correlation to the GFCI then we see that Busan performs better than in its peers in factors that are less influential to the GFCI 14:

Busan is:	ranked lower in	ranked higher in	Difference (Higher – Lower)
Shenzhen	19.3	17.7	-1.6
Beijing	10.4	16.5	6.1
Shanghai	24.7	15.3	-9.4
Osaka	22.1	13.7	-8.4
Seoul	13.0	0.0	-13.0
Tokyo	28.6	11.3	-17.3
Oslo	23.2	8.7	-14.5
Hong Kong	37.6	0.0	-37.6
Singapore	33.4	3.6	-29.8



Below is a summary table of the strengths and weaknesses we reached by studying the instrumental factors and other data on Busan:

Strengths	Weaknesses	Contradictory
Technology adoption	International Awareness	Education / Human Capital
Infrastructure	GDP Composition	Innovation Environment
Low Cost Alternative	Economic Openness & FDI	GDP Size and Potential
Macroeconomic Environment	Labour Market	Appeal
Robust stock exchange and other institutions	Political & Regulatory Environment	Institutional Framework

There are many examples of countries with more than one financial centre:

- London and Edinburgh in UK;
- Zurich and Geneva in Switzerland;
- Tokyo and Osaka in Japan;
- Sao Paulo and Rio de Janeiro in Brazil;
- Frankfurt and Munich in Germany;
- New York and five others in USA;
- Toronto and three others in Canada;
- Shanghai and four others in China.

Being a ‘second’ financial centre in a country should not be considered a weakness. Many second cities thrive as financial centres, typically by specialising in one sector (such as wealth management, insurance, or maritime finance).

## Strengths

- ◆ Technology adoption and usage – a number of measures indicate that Korea in general and Busan in particular possess sufficient technological readiness and that usage by society, business and government is at a high level. This is an important strength in that technology and especially ICT improves productivity and economic efficiency and is especially important for the financial services industry in an increasingly globalised world. Amongst the various measures where Busan’s performance is strong are: technological readiness of WEF’s Global Competitiveness Index, IT infrastructure of EIU’s IT Competitiveness, Usage and Impact of WEF’s

Global IT, use of ICT of WEF's Enabling Trade, knowledge and technology outputs of INSEAD's Innovation index;

- ◆ Infrastructure – most of the reviewed measures indicate that Busan has a world class infrastructure. Like technology, infrastructures serves to boost economic efficiency as well as quality of life in a city and is an important pre-requisite of a modern, developed and vibrant financial centre. Sub-indices by WEF, INSEAD, Quality of Roads and Liner Shipping Connectivity all point to a robust physical and communication infrastructure. It should be noted however that Busan's performance in EIU's Physical Capital sub-index indicates that there is ample room for improvement. Furthermore, Busan has low pollution and favourable weather conditions;
- ◆ Low cost alternative – Seoul performs well in terms of costs as compared to the rest of the peer group and Busan is a lower cost destination<sup>1</sup>. Rents and local services costs are an important component of the overall cost structure of any business and the lower they are the more attractive a destination can be considered. The combination of a broad and deep stock market proximity, world class infrastructure, widespread ICT usage and low rents can be an attractive mix for the financial services sector. It is important to note that data for Busan is not easy to find in the office cost indices that we use but we understand that office costs are approximately 40% lower than in Seoul. The new financial centre building (shortly due for completion) will enhance Busan's standing in terms of office space for the financial services industry;
- ◆ Macro-economy – a stable macroeconomic environment is an important trait for a country's competitiveness and one that is increasingly scrutinised by the wider investment community. This is rarely viewed from a city perspective but a city operates within a country-wide macroeconomic framework. Korea has the rare advantage of being a developed country with a stable macro-economy. The S&P, WEF and EIU's operational risk rating all point to a stable macro-economic environment with low risks;
- ◆ Stock exchange – Busan is the home of Korea Exchange, a robust and diversified exchange with a global status. There is little doubt that a world-class stock exchange to engender a broad and deep capital market is a fundamental condition for a world-class financial centre. Busan scores well in all measures from the World Federation of Stock Exchanges. Overall capitalisation of Korea Exchange is not as high in comparison to the rest of the peer group, which indicates that there is a scope for improvement. It should also be noted that several other Korean institutions are likely to move to Busan in the foreseeable future: The Korean Securities Depository, The Korean Asset Management Corporation and the Korean Housing Finance Corporation.

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<sup>1</sup> [http://www.numbeo.com/property-investment/compare\\_cities.jsp?country1=South+Korea&country2=South+Korea&city1=Busan&city2=Seoul](http://www.numbeo.com/property-investment/compare_cities.jsp?country1=South+Korea&country2=South+Korea&city1=Busan&city2=Seoul)

## Weaknesses

- ◆ International awareness – the absence of Busan from many of the reviewed city-based factors points to its main weakness, which is the low international awareness. Busan has some very important features, attractive for business in general and financial services in particular but their value cannot be efficiently utilised if the wider investment community does not know about them. As but one example, most people I've spoken to automatically assume that Korea Exchange is located in Seoul, whereas in fact it is in Busan, on the other side of the country. Busan's absence from instrumental factors such as Global Cities Image, Global Power Cities, Office Occupation Costs, World's Top Tourism Destinations and Price Levels impedes its performance as a financial centre;
- ◆ GDP composition – there are two aspects to that weakness: the share of business and finance services in Busan's economy is quite low as compared to the peer group and Busan's economy is not sufficiently diversified as it is too dependent on manufacturing. South Korea's economy is considered by many reputable international bodies (notably the OECD, the IMF and the World Bank) as developed but Busan's GDP composition is more reminiscent of an emerging economy. It is very similar to Shenzhen's, the (emerging) manufacturing hub adjacent to (developed) Hong Kong. As noted, the financial centres ranked in the top 10 have a much higher economic exposure to business/finance services. On the positive side, Busan has a large potential demand for financial services and maritime services from other nearby cities such as Ulsan and Changwon;
- ◆ Economic openness and FDI – the review of instrumental factors portrays South Korea as a technologically advanced but relatively closed economy. Economic openness is pivotal for competitive and sustainable growth; it exposes local business actors to international competition but this forces them to become more competitive and also grants them access to broader markets and to more competitive products and services. The Global Talent Index by the EIU, the Global Enabling Trade Report by the WEF and the Global Innovation Index by INSEAD all expose Korea's openness as a weakness;
- ◆ Labour market – labour market rigidities also hamper competitiveness. High unit labour costs inevitably lead to subsequent painful adjustments. Labour market rigidities were exposed as a weakness by the WEF and EIU's Operational Risk Ratings;
- ◆ Political and regulatory environment – a number of instrumental factors point to weaknesses in the overall political and regulatory environment of Korea. This weakness is reviewed in WEF's Global IT, Competitiveness and Enabling Trade reports, EIU's IT Industry (Business Environment) and Operational Risk Rating and INSEAD's Global Innovation Index. It is also a major drag on many other instrumental factors.

## Contradictory Indications

- ◆ Education and Human Capital – human capital is essential for a modern and developed economy because the higher up the value chain an economy is the more complex it is and therefore the more highly skilled professionals it needs. Some studies like WEF's Competitiveness rate education and human capital higher, others like EIU's Global City Competitiveness rate it as a weakness; others still like WEF's Global IT, EIU's Global Talent and INSEAD's Global Innovation Index make it less clear with certain aspects like talent, quality of labour force and tertiary education rated high while others, like general education and skills low. It is particularly worrisome that EIU's Global City Competitiveness, the only study that rates human capital specifically for Busan is not at all favourable. Most of the leading financial centres are very multi-cultural with a cosmopolitan atmosphere. The population of London and New York includes over one-third of foreign-born people. The number of foreign born in South Korea is tiny in comparison. In order to have a 'global' or 'international' centre it is important to have 'global' and 'international' players. Many people who have spent time in South Korea and returned to Europe report their perceptions of Seoul and Busan as cities that are fairly 'unfriendly' to foreigners;
- ◆ Innovation Environment – innovation engenders competitiveness, attracts talent and raises awareness. An essential characteristic of a developed economy is that it is knowledge based and innovation-driven. The instrumental factors review provides a mixed picture with some factors like WEF's Competitiveness and Global IT and INSEAD's Global Innovation (technology outputs, business sophistication) pointing to a strong innovation environment, while other like 2ThinkNow and INSEAD's innovation linkages raising concern. It is particularly worrisome that 2ThinkNow's Innovation Cities, a city-based factor, ranks Busan very low;
- ◆ GDP Size and Potential – Busan has a relatively strong GDP performance according to the Brookings Institution but measures like EIU's Global City economic strength and poor demographics point to declining potential. Busan's economy represents a sizeable share of the country's GDP, which implies that local authorities and interested groups should have an influence at the national level, but that share is insignificant as compared to Seoul's; in effect the latter overshadows Busan by far. The GDP composition, which is as already noted reminiscent of an emerging country, indicates that there is ample scope for growth particularly with respect to higher value-added, less labour-intensive economic sectors (which would be a necessity given poor demographics);
- ◆ Institutional Framework – institutions act in much the same way as infrastructure (and are sometimes referred to as soft infrastructure) in that they boost economic productivity by providing an environment where businesses operate efficiently. They are however a function of the political and regulatory environment so if the latter less business-friendly, then the institutional framework would reflect that (the reverse is not always true). Korea's institutions are depicted as areas of concern in S&P's BICRA, WEF's Competitiveness and the Capital Access Index amongst others.

There are however instances like the Global Enabling Trade report's border procedures efficiency, which indicate institutions are effective within the wider regulatory framework. And a very important finding is that EIU's Institutional Effectiveness rates Busan (not Korea) relatively high;

- ◆ Appeal – Global City Appeal by the EIU is a definite weakness of Busan but interestingly that same survey rates Busan's social and cultural character relatively high. Busan's global appeal is lagging because the city is not globally recognisable as much as Seoul is. It is not rated in a number of indices but possess a number of important and attractive traits that people and businesses can find quite appealing.

## Strategic Priorities

We list some suggestions below:

- ◆ **raise international awareness for Busan's strengths** – participation of Busan in as many international surveys as possible, attracting media coverage to highlight its strengths, organising international conferences, fairs and exhibitions in order to attract foreign companies and position Busan as the place to do business. Busan is already ranked highly in the number of international conventions it holds. Busan is one of the best endowed cities that people in Europe and North America have never heard of. It should be remembered that it is the fifth largest container port in the world, has a comfortable living environment, is less than an hour's flight from Seoul;
- ◆ **invest into the development of an environment highly attractive for education, human capital and innovation** – Pusan University is a world class Top 500 university but is one of 11 in Korea and most of the rest, which are higher up the ranks are in Seoul or other cities<sup>2</sup>. Developing human capital and innovation is important for four reasons:
  - as a developed economy with unfavourable demographics Korea's economic future lies in knowledge and innovation;
  - as the site of Korea Exchange, a strategic port and a city looking to develop its share of business and finance services, Busan needs to develop its human capital base sufficiently;
  - combining financial and innovative prowess can engender entrepreneurship, which would in turn create a positive spiral of job creation, higher awareness and attractiveness and higher appeal to financial and human capital; and
  - becoming an education/innovation hub is a great form of differentiation for the brand Busan. From an outsider's point of view Seoul is a symbol of most things Korean – politics, business, industry. A secondary city can best differentiate and raise awareness of itself by focusing on a particular trait and being the education, innovation and hi-tech hub is a worthy goal for which Busan has a good basis;

<sup>2</sup> <http://www.shanghairanking.com/World-University-Rankings-2013/South-Korea.html>

- ◆ **continuously improve infrastructure, particularly with regard to ICT and air travel** – most surveys agree that Korea has a world class infrastructure and high levels of technological development and IT adoption. This status should be maintained and improved upon. An international financial centre and port necessitates a high quality transport, energy and ICT infrastructure. This is also a prerequisite for economic productivity and a facilitator of innovation, entrepreneurship and business sophistication. Busan does suffer from not having a larger and more modern international airport with many international visitors having to travel to Busan via Seoul;
- ◆ **engender an institutional framework as transparent and efficient as possible within the national framework** – while the institutional environment is not the most attractive feature of South Korea, this appears to be a matter of policy, not of incapacity. Institutional effectiveness is amongst the strongest features of Busan according to the EIU and if it is to position itself as an international financial centre and the place to do business, effective and transparent institutions are a must. This may serve as a means to attract business from outside as well as from inside Korea;
- ◆ **lobby for more openness to foreign competition at the national level** – a more open environment is in Busan's interests as it will raise interest and bring more competition from outside Korea. it will decrease Seoul's dominance as more businesses will be exploring the best offer and it will help Busan's international linkages. Above all, foster a reputation of being open and welcoming to talented foreigners.

The table below outlines a number of guidelines that have emerged from this report as priority targets for the private sector and for the urban and national levels of governance:

Local	National	Private Sector
Brand Development	Economic Openness and Exposure to Foreign Competition & Trade	Working Closely with Capital Markets
Education, Innovation & Human Capital	Efficiency of Public Services & Government	Working Closely with Universities
Infrastructure & Technology Usage	Simple and Transparent Regulatory Regime	Busan Brand
Local Institutions Efficiency & Transparency	Labour Market Liberalisation	R&D and Innovations



## 2. BACKGROUND

### 2.1. The Global Financial Centres Index

Z/Yen Group Limited has substantial background in measuring the competitiveness of financial centres around the world. The Global Financial Centres Index (GFCI) developed by Z/Yen and first published by the City of London in January 2007 has recently issued its 14<sup>th</sup> edition, sponsored by the Qatar Financial Centre Authority. Over the years the study has become an increasingly important and respected yardstick that various professional bodies, research institutions and city authorities across the world use to benchmark the competitiveness of cities with regard to the financial services industry.

The GFCI assigns ratings to financial centres by using Z/Yen's proprietary statistical prediction engine PropheZy<sup>®</sup>, a software package that uses support vector mathematics to identify patterns and analyse large statistical datasets. There are two main inputs that the software utilises for the purposes of GFCI:

- ◆ Instrumental factors – objective city or country assessments developed by a number of world renown reputable organisations. These assessments are used to quantify various city characteristics, which are determined as important factors of competitiveness. The instrumental factors are split into 5 broad categories:
  - Business environment – includes measures such as Operational Risk Rating developed by the Economist Intelligence Unit (EIU), Ease of Doing Business developed by the World Bank, Total Tax Rates by PWC and Corruption Perceptions Index by Transparency International;
  - Infrastructure – includes measure such as Office Space by Cushman & Wakefield, E-Readiness by EIU and Roads and Railways per Land Area by the CIA World Fact-book;
  - Financial Sector Development – includes a number of stock exchange measures updated monthly by the World Federation of Stock Exchanges, Domestic Credit Provided by Banking Sector provided by the World Bank and the Capital Access by the Milken Institute;
  - Human Capital – includes measures such as Graduates in Social Science, Business and Law by the World Bank, the Human Development Index by the United Nations and Quality of Life by Mercer HR;
  - Reputational Factors– includes broader measures like the Global Competitiveness Index by the World Economic Forum, Global Cities Index by AT Kearney, Innovation Cities Global Index by EIU and FDI inflows by the United Nations.

These are just a few examples; the entire set of 102 instrumental factors for the GFCI 14 are listed in Appendix B.

- ◆ Financial centres assessments – the other input in the statistical model is a range of city assessments, on a scale of 1 to 10, provided by a number of international financial services professionals (within the last 24 months). The questionnaire is updated every quarter and assessments are discounted with a log model that puts more weight on more recent ones. For GFCI 14 a total of 25,749 assessments were used. The respondents are

categorised into five broad sub-industries: investment management, banking, insurance, government/regulatory, and professional services.

A more thorough review of the methodology is presented in Appendix A.

Investment in a financial centre development is an ongoing process with long term rewards; one that has to be constantly monitored and reassessed. That is why we have endeavoured to create the benchmark that the Global Financial Centres Index has become.

The financial services industry forms a vital part of every modern economy. It is impossible for a country to be considered developed if it doesn't have a competitive and efficient financial services sector that serves to channel investment where it adds most value and to allocate capital to its most productive use. . The financial centres of the world serve to facilitate long term sustainable development through capital formation, which transfers into economic growth, innovation and better standard of living.

## 2.2. Busan and its Peers in Global Financial Centres Index

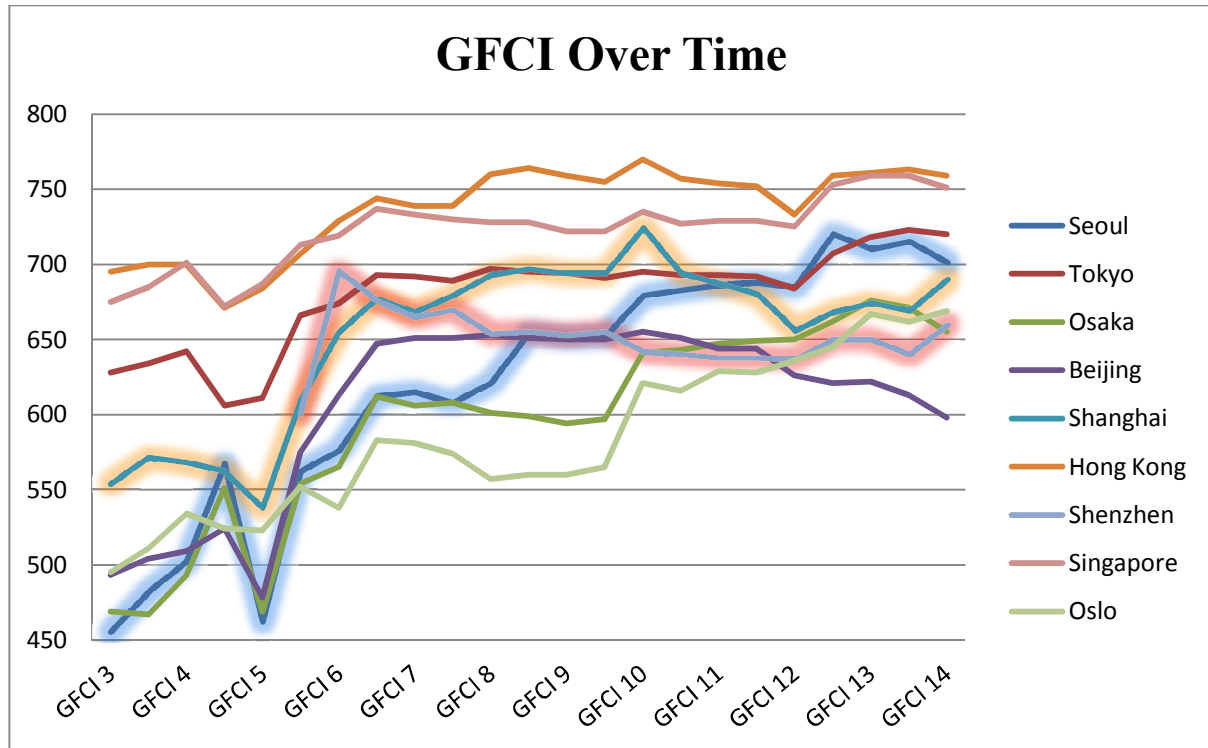
Busan has only recently been added to the GFCI questionnaire and has not yet received a GFCI rating. It has received a sufficient amount of questionnaire responses and will therefore be included in GFCI 15. However a review of these responses is beyond the scope of this report and we shall thus focus solely on the instrumental factors.

In conjunction with the Bank of Korea we have selected a group of financial centres (the peer group), which participate in the GFCI. The centres included in the peer group are:

- ◆ Seoul – the main city and capital of South Korea.
- ◆ Tokyo – the main city and capital of Japan, the other major developed economy in the Far East;
- ◆ Osaka – a secondary financial centre in Japan, which makes it highly comparable to Busan;
- ◆ Beijing – the capital of China, the largest economy in the Far East;
- ◆ Shanghai – the most prospective Chinese financial centre;
- ◆ Hong Kong – GFCI's most highly rated financial centre in the Far East;
- ◆ Shenzhen – a secondary financial centre in China;
- ◆ Singapore – GFCI's second most highly rated financial centre in the Far East;
- ◆ Oslo – a secondary European financial centre and a sea port, which makes it a close European counterpart of Busan.

The graph below shows the peer group centres' performance in the GFCI:





Clearly Hong Kong and Singapore are the peer group leaders and have managed to sustain a significant margin between themselves and the rest of the peer group. Tokyo has also maintained a higher ranking over the years though it has seen a more intense competition from Shenzhen, Shanghai and more recently from Seoul.

Seoul (highlighted in blue) started from a low base in GFCI 3 and has steadily risen over the years. Oslo typically ranks lower but exhibits a similar type of steady and sustainable growth, which is characteristic for financial centres in developed markets.

We review Busan and its peer group's performance in the major GFCI instrumental factors in the following sections starting with a brief outline of our methodology.

### 3. METHODOLOGY

This report provides a detailed analysis of the main input to the GFCI model – the instrumental factors – and shall use this to analyse the prevailing strengths and weaknesses of Busan. Once these are determined the report will suggest strategic priorities for Busan’s policy makers at the national and local levels and for the private sector. The precise steps are outlined below:

#### Instrumental Factors Review

- ◆ We establish the instrumental factors that have the most significant correlation with the final GFCI score –we use this as a simple way of measuring the factors’ relevance to GFCI end result;
- ◆ We analyse Busan’s and its peer group performance in the 40 most relevant instrumental factors as well as in several others – these additional factors are wholly relevant to Busan and its peer group as they are city-based and provide important insights;
- ◆ We establish traits where Busan’s (or Korea’s where country-based) performance is strong and where improvements are needed;
- ◆ We also provide summary tables of Busan and the peer group’s relative performance in each factor and an opinion as to whether this factor is influenceable to policymakers within the public or private sector.

#### Conclusions

- ◆ Following the analysis of the inputs and looking at highlights from the providers of the instrumental factors we identify Busan’s strengths, weaknesses and ambivalent traits that cannot be safely categorised as either;
- ◆ Given these three sets of characteristics we recommend a brief set of strategic priorities that are shown by our analysis to be the focus for policy makers.

#### Appendices

- ◆ A detailed review of the GFCI methodology;
- ◆ A detailed list of all the instrumental factors, the institutions that developed them and web-links to assist referencing.

## 4. INSTRUMENTAL FACTORS ANALYSIS

### 4.1. The Main GFCI Instrumental Factors

In order to discover the factors that can be influenced by policymakers, we examined the 40 instrumental factors that are most highly correlated with the GFCI 14 ratings:

Instrumental Factors	Source	Basis	R-Sq
Global City Competitiveness	Economist Intelligence Unit (EIU)	City	0.5246
Banking Industry Country Risk Assessments	Standard & Poor	Country	0.4648
Global Power City Index	Institute for Urban Strategies	City	0.4359
Office Occupancy Costs	CBRE	City	0.4287
World Competitiveness Scoreboard	World Competitiveness Yearbook	Country	0.4182
Global Competitiveness Index	World Economic Forum (WEF)	Country	0.4123
Volume of Stock Futures Trading	World Federation of Stock Exchanges (WFSE)	City	0.3781
City Global Image	KPMG	City	0.3644
Commodity Futures Notional Turnover	WFSE	City	0.3553
Global Cities Index	AT Kearney	City	0.3553
Price Levels	UBS	City	0.3114
Innovation Cities Global Index	2thinkknow Innovation Cities	City	0.3087
Financial Secrecy Index	Tax Justice Network	Country	0.3052
Citizens Domestic Purchasing Power	City Mayors	City	0.3031
Connectivity	EIU	City	0.2986
IT Industry Competitiveness	EIU	Country	0.2853
Institutional Effectiveness	EIU	City	0.2812
Number of Greenfield Investments	KPMG	City	0.2563
Political Risk	Exclusive Analysis Ltd	Country	0.2561
Physical Capital	EIU	City	0.2530
Global Information Technology	WEF	Country	0.2450
Wage Comparison Index	UBS	City	0.2449
Global Talent Index	EIU	Country	0.2430
Capital Access Index	Milken Institute	Country	0.2422
Top Tourism Destinations	Euro Monitor	City	0.2406
Liner Shipping Connectivity Index	The World Bank	Country	0.2363
Global Enabling Trade Report	WEF	Country	0.2357

Instrumental Factors	Source	Basis	R-Sq
Business Environment	EIU	Country	0.2343
City Infrastructure	EIU	City	0.2343
Volume of Stock Options Trading	WFSE	City	0.2283
Capitalisation of Stock Exchanges	WFSE	City	0.2186
Operational Risk Rating	EIU	Country	0.2127
Commodity Options Notional Turnover	WFSE	City	0.2109
Quality of Roads	WEF	Country	0.2078
City Global Appeal	EIU	City	0.2069
Office Space Around the World	Cushman & Wakefield	City	0.2064
Global Innovation Index	INSEAD/WIPO	Country	0.2058
Human Capital	EIU	City	0.2053
Value of Share Trading	WFSE	City	0.2035
Number of International Fairs and Exhibitions	WEF	Country	0.2019

## 4.2. Busan's Performance in the Instrumental Factors

The following table is a summary of Busan's performance in the 40 most influential instrumental factors as compared with other financial centres; it shows how centres in Busan's peer group are ranked relative to each other in each separate instrumental factor.

It is important to note that because the statistical model used to build the GFCI treats blanks very differently from zeros, we have ignored blank values in this summary:

Instrumental Factors	BUS	BEI	HON	OSA	OSL	SEO	SHA	SHE	SIN	TOK
Global Competitiveness City	<b>10</b>	6	2	8	5	4	7	9	1	3
Banking Industry Country Risk Assessments	<b>=6</b>	=8	=1	=1	=1	=6	=8	=8	=1	=1
Global Power City Index		6	4	5		3	7		2	1
Office Occupancy Costs		4	8		6	2	3	1	5	7
World Competitiveness Scoreboard	<b>=7</b>	=4	1	=9	3	=7	=4	=4	2	=9
Global Competitiveness Index	<b>=6</b>	=8	2	=3	5	=6	=8	=8	1	=3
Volume of Stock Futures Trading	<b>3</b>		1		4					2
City Global Image		5	3				2		4	1
Commodity Futures Notional Turnover	<b>1</b>									
Global Cities Index		5	2	7		3	6	8	4	1
Price Levels		2	4		6	3	1			5
Innovation Cities Global	<b>10</b>	8	1	7	6	2	4	9	5	3

Instrumental Factors	BUS	BEI	HON	OSA	OSL	SEO	SHA	SHE	SIN	TOK
Index										
Financial Secrecy Index	=1		6	=3		=1			5	=3
Citizens Domestic Purchasing Power		6	3		4	2	5			1
Connectivity		3	=4	=4		2	=4	8	=4	1
IT Industry Competitiveness	=5	=8	=5	=3	2	=5	=8	=8	1	=3
Institutional Effectiveness	=6	=8	2	=3	5	=6	=8	=8	1	=3
Number of Greenfield Investments		3	2			5	1			4
Political Risk	=3	=7		=3	2	=3	=7	=7	1	=3
Physical Capital	10	=8	=1	5	4	6	7	=8	=1	=1
Global Information Technology	=3	=8	5	=6	2	=3	=8	=8	1	=6
Wage Comparison Index		1	3		6	4	2			5
Global Talent Index	=4	=8	3	=6	1	=4	=8	=8	2	=6
Capital Access Index	=3	=8	1	=6	5	=3	=8	=8	2	=6
Top Tourism Destinations		5	1			6	4	3	2	7
Liner Shipping Connectivity Index	=6	=1	4	=8	10	=6	=1	=1	5	=8
Global Enabling Trade Report	=6	=8	2	=4	3	=6	=8	=8	1	=4
Business Environment	=4	=8	2	=6	3	=4	=8	=8	1	=6
Infrastructure		6	=2	=2		5	8	7	1	4
Volume of Stock Options Trading			1	4	3					2
Capitalisation of Stock Exchanges	5		2	7	8		3	4	6	1
Operational Risk Rating	=6	=8	3	=4	2	=6	=8	=8	1	=4
Commodity Options Notional Turnover										
Quality of Roads	=3	=7	=1	=5	10	=3	=7	=7	=1	=5
City Global Appeal	9	3	4	8	7	5	6	10	2	1
Office Space Around the World		6	8		4	1	5	2	3	7
Global Innovation Index	=4	=8	2	=6	3	=4	=8	=8	1	=6
Human Capital	10	=5	1	8	2	9	7	4	3	=5
Value of Share Trading	4		5	6	8		3	2	7	1
Number of International Fairs and Exhibitions	=6	=1	10	=4	8	=6	=1	=1	9	=4

This is only a summary of the relative positions of the centres but it does act as an indicator of relative competitiveness. There are a few comparisons worth noting:

Most of the peer group cities can be considered close competitors. In terms of instrumental factors, Busan ranks slightly better than the Chinese centres:

- ◆ Busan is ranked higher than Shenzhen in 14 factors and ranked lower in 9;
- ◆ Busan is ranked higher than Beijing in 13 factors and ranked lower in 8;
- ◆ Busan is ranked higher than Shanghai in 13 factors and lower in 10;

Busan ranks just below Seoul, Osaka and Tokyo:

- ◆ Busan is ranked higher than Osaka in 11 factors and ranked lower in 12;
- ◆ Busan is ranked higher than Seoul in 0 factors and ranked lower in 5;
- ◆ Busan is ranked higher than Tokyo in 9 factors and lower in 15;

The other peer group centres however can be considered superior competitors:

- ◆ Busan is ranked higher than Oslo in 7 factors and ranked lower in 17;
- ◆ Busan is ranked higher than Hong Kong in 4 factors and lower in 19;
- ◆ Busan is ranked higher than Singapore in 4 factors and lower in 20.

Below is a summary table of Busan's relative position in its peer group.

Busan is	Ranked Lower in	Ranked Higher in	Difference (Higher – Lower)	Competitor
Shenzhen	9	14	5	Close
Beijing	8	13	5	Close
Shanghai	10	13	3	Close
Osaka	12	11	-1	Close
Seoul	5	0	-5	Close
Tokyo	15	9	-6	Close
Oslo	17	7	-10	Superior
Hong Kong	19	4	-15	Superior
Singapore	20	4	-16	Superior

If the factors are weighted by the strength of their correlation to the GFCI then we see that Busan performs better than in its peers in factors that are less influential to the GFCI 14:

Busan is:	ranked lower in	ranked higher in	Difference (Higher – Lower)
Shenzhen	19.3	17.7	-1.6
Beijing	10.4	16.5	6.1
Shanghai	24.7	15.3	-9.4
Osaka	22.1	13.7	-8.4
Seoul	13.0	0.0	-13.0
Tokyo	28.6	11.3	-17.3
Oslo	23.2	8.7	-14.5
Hong Kong	37.6	0.0	-37.6
Singapore	33.4	3.6	-29.8

### 4.3. Instrumental Factors Review

**Global City Competitiveness, Economist Intelligence Unit (2012)** – The peer group is lead by Singapore, Hong Kong and Tokyo, ranked 3<sup>rd</sup>, 4<sup>th</sup> and 6<sup>th</sup> among GFCI centres respectively. Seoul follows at a distance and is ranked 18<sup>th</sup> among GFCI centres and the rest of the peer group centres are still further down the ranks. Busan takes the last place in the peer group and is ranked 48<sup>th</sup>, ten places below the last-but-one Shenzhen.

The Global City Competitiveness Index is an assessment of 120 urban agglomerations around the world, comprising around 29% of the world’s economy. Cities are rated on the basis of their demonstrated ability to attract capital, businesses, talent and visitors.’ It is made up of 21 qualitative and ten quantitative indicators grouped into eight distinct thematic categories:

- ◆ Institutional Effectiveness – a combination of qualitative measures that rate a city according to stability of regulations, predictability and fairness of political processes and effectiveness of the system;
- ◆ Physical Capital – an assessment of the availability of developed and efficient infrastructure (road networks, international links, public transport and telecommunications), which helps businesses operate more efficiently and improves the quality of life for residents and visitors;
- ◆ Global Appeal – measures the attractiveness of each city by considering the presence of globally renowned institutions (Fortune 500 companies, world-renowned think- tanks, top universities and colleges) headquartered in the city, as well as the number of international flights, conferences and conventions;
- ◆ Human Capital – an assessment of the availability of a large, skilled, healthy and productive labour force combined with ease of hiring foreign nationals and attitudes to entrepreneurship and risk-taking;
- ◆ Financial Maturity – measure the breadth and depth of financial industry clusters and draws heavily on the Global Financial Centres Index itself;

- ◆ Economic Strength – combines GDP size and growth with the size of middle class and a measure of regional market integration;
- ◆ Environment & Natural Hazards – focuses on the risk of natural disasters and a qualitative measure of environmental governance;
- ◆ Social & Cultural Character – an assessment of freedom of expression, human rights, openness, diversity and cultural vibrancy, combined with levels of crime.

The Global Financial Centres Index uses EIU's Global City Competitiveness along with four of its constituent measures as instrumental factors. We decided to use Human Capital, Institutional Effectiveness, Global Appeal and Physical Capital as instrumental factors in their own right as they represent excellent measures of fields we consider fundamental to a financial centre's competitiveness. Our initial hypothesis was confirmed by these factors' high R-squared with GFCI (they all feature in the top 40). We did not use the remaining four measures only because we already have instrumental factors to address the topics they measure; Financial Maturity is based on measures developed by Z/Yen for the GFCI and therefore could not be used.

We review Busan and its peer group's positions in all five instrumental factors below. These positions represent the rank that each centre holds amongst the 80 centres in the GFCI:

Global City Competitiveness	GFCI 14	GFCI 13	GFCI 12
Singapore	3	3	3
Hong Kong	4	4	4
Tokyo	6	6	6
Seoul	18	18	18
Oslo	25	25	25
Beijing	28	28	28
Shanghai	31	31	31
Osaka	34	34	34
Shenzhen	38	38	38
<b>Busan</b>	<b>48</b>	<b>48</b>	<b>48</b>

This instrumental factor has a large number of inputs, which makes it difficult to influence. That said, the majority of those inputs can be in large part directly influenced by policymakers (but not by the private sector).

**Institutional Effectiveness** – Busan is placed in the middle of the rankings alongside Seoul in 28<sup>th</sup> place among GFCI centres. It is just behind Oslo (27<sup>th</sup>) and closely behind Tokyo and Osaka (both in 22<sup>nd</sup> place). Singapore is the undisputed peer group leader, ranked 5<sup>th</sup> and followed by Hong Kong (14<sup>th</sup>) at a considerable distance. The three Chinese centres are at a considerable distance behind Busan and are all ranked 57<sup>th</sup>.

Institutional Effectiveness	GFCI 14	GFCI 13	GFCI 12
Singapore	5	5	5
Hong Kong	14	14	14
Osaka	22	22	22



Institutional Effectiveness	GFCI 14	GFCI 13	GFCI 12
Tokyo	22	22	22
Oslo	27	27	27
<b>Busan</b>	<b>28</b>	<b>28</b>	<b>28</b>
Seoul	28	28	28
Beijing	57	56	54
Shanghai	57	56	54
Shenzhen	57	56	54

This factor is highly dependent on policy makers and can be influenced.

**Physical Capital** – This factor places Busan last in the peer group and 44<sup>th</sup> among GFCI centres. It is very closely behind the Chinese centres of Shenzhen and Beijing, which share the 39<sup>th</sup> place and Shanghai, which is 38<sup>th</sup>. Seoul is further ahead in 30<sup>th</sup> place. Hong Kong, Singapore and Tokyo are all ranked 1<sup>st</sup> both among GFCI centres and in the peer group:

Physical Capital	GFCI 14	GFCI 13	GFCI 12
Hong Kong	1	1	1
Singapore	1	1	1
Tokyo	1	1	1
Oslo	8	8	8
Osaka	15	15	15
Seoul	30	30	30
Shanghai	38	38	38
Beijing	39	39	39
Shenzhen	39	39	39
<b>Busan</b>	<b>44</b>	<b>44</b>	<b>44</b>

Physical capital is essentially an assessment of a centre's infrastructure, which in large part depends on sound policymaking in the public sector.

**Global Appeal** – Tokyo leads the peer group in 3<sup>rd</sup> place, followed immediately by Singapore (4<sup>th</sup>), Beijing (5<sup>th</sup>) and Hong Kong (6<sup>th</sup>). Seoul is further down the ranks in 12<sup>th</sup> position and Shanghai still further in 21<sup>st</sup>. The rest of the centres are far behind after the 40<sup>th</sup> place. Busan is last but on in the peer group in 58<sup>th</sup> place ahead of Shenzhen, which is 62<sup>nd</sup>. Some centres' ranks are better in GFCI 12 even though we use the same survey; this is due to the addition of new centres in GFCI 13, which happen to score better and are accordingly ranked better thus pushing centres with lower scores down the ranking. If Busan participated in GFCI 12 it would have been overtaken in GFCI 13 (as was Osaka) by New Delhi and Santiago, which enter at 45<sup>th</sup> and 47<sup>th</sup> position respectively.

City Global Appeal	GFCI 14	GFCI 13	GFCI 12
Tokyo	3	3	3
Singapore	4	4	4
Beijing	5	5	5
Hong Kong	6	6	6
Seoul	12	12	12
Shanghai	21	21	21
Oslo	44	44	44
Osaka	48	48	46
<b>Busan</b>	<b>58</b>	<b>58</b>	<b>56</b>
Shenzhen	62	61	59

This factor is not easy to influence by policy makers though developing a recognisable city brand and creating the right conditions (e.g. through easing regulation, taxation and using incentives) would help. It is perhaps more influenceable by the private sector as it measures international flights, conferences and conventions.

**Human Capital** – Hong Kong and Oslo are the peer group leaders in 2<sup>nd</sup> and 6<sup>th</sup> places among GFCI centres. Singapore is third but in 24<sup>th</sup> position is at a considerable distance; Shenzhen is still further down the ranks and is 35<sup>th</sup>. Seoul and Busan are last in the peer group ranked 49<sup>th</sup> and 55<sup>th</sup> respectively. There are bigger disruptions in the ranking between GFCI 12 and 13 because of the stronger entry of Santiago in 23<sup>rd</sup> place and New Delhi in 38<sup>th</sup>; Tianjin enters 50<sup>th</sup> thus causing a difference of three places for Busan, which falls from 52<sup>nd</sup> in GFCI 12 to 55<sup>th</sup> in GFCI 13.

Human Capital	GFCI 14	GFCI 13	GFCI 12
Hong Kong	2	2	2
Oslo	6	6	6
Singapore	24	24	23
Shenzhen	35	35	34
Beijing	42	42	40
Tokyo	42	42	40
Shanghai	46	46	44
Osaka	47	47	45
Seoul	49	49	47
<b>Busan</b>	<b>55</b>	<b>55</b>	<b>52</b>

This is the instrumental factor that tops the list in terms of importance. Not only it is ranked highest in terms of R-squared with GFCI 14 but in addition all of its constituent parts used as separate instrumental factors are in the top 40. We therefore review it more thoroughly. The table below provides a more detailed view of the peer group's performance in all constituent parts within the context of EIU's survey<sup>3</sup>:

3

Constituent parts (weight)	BUS	BEI	HON	OSA	OSL	SEO	SHA	SHE	SIN	TOK
Global City Competitiveness (overall score)	64	39	4	47	33	20	43	52	3	6
Economic strength (30%)	91	10	20	87	73	34	7	2	15	8
Physical capital (10%)	61	55	1	17	9	36	53	55	1	1
Financial maturity (10%)	68	10	1	33	33	10	10	25	1	1
Institutional effectiveness (15%)	41	95	22	31	40	41	95	95	6	31
Social and cultural character (5%)	47	73	41	52	45	28	73	96	42	28
Human capital (15%)	86	56	2	63	6	69	60	47	36	56
Environment and natural hazards (5%)	72	84	59	72	19	43	72	59	8	72
Global appeal (10%)	80	5	6	52	47	13	23	102	4	3

Looking at Busan's relative standing in EIU's index constituent parts:

- ◆ its strong points are institutional effectiveness and social & cultural character;
  - ◆ financial maturity, environmental hazards and physical capital are close to Busan's overall performance of this index (which is itself not satisfactory compared to the peer group);
- economic strength, global appeal and human capital can be considered weaknesses.

This instrumental factor can be influenced by policy makers through creating an educated workforce and creating the right regulatory conditions for attracting foreign nationals. The private sector can also help in the creation of skilled workforce and through entrepreneurship attitudes. Local authorities could be perhaps most effective in the long-run if they could help create a modern university combined with a research centre that collaborates closely with the private sector and engenders entrepreneurship. This would serve to boost human capital, social and cultural character and global appeal and in combination with institutional effectiveness (open and efficient local institutions) would create a sustainable long term growth potential (to improve economic strength).

**Source:** <http://www.managementthinking.eiu.com/>

**Banking Industry Country Risk Assessments, Standard & Poor's (2012)** – This country-based ranking categorises countries' banking systems in ten tiers with Tier 1 countries' banking systems considered the least risky. Singapore, Oslo, Hong Kong and the two Japanese centres are placed in Tier 2, which places them in 7<sup>th</sup> position among GFCI centres (there are therefore six GFCI centres in Tier 1). South Korea is in Tier 3, which places Busan and Seoul on the 24<sup>th</sup> place. China's banking system is rated as more risky (Tier 5) and so Beijing, Shanghai and Shenzhen share the 49<sup>th</sup> place.

Banking Industry Country Risk Assessments	GFCI 14	GFCI 13	GFCI 12
Hong Kong	7	7	7
Osaka	7	7	7
Oslo	7	7	7
Singapore	7	7	7
Tokyo	7	7	7
<b>Busan</b>	<b>24</b>	<b>24</b>	<b>24</b>
Seoul	24	24	24
Beijing	49	48	47
Shanghai	49	48	47
Shenzhen	49	48	47

Standard & Poor's Rating Services ranks the risk in 87 countries' banking systems in accordance to their respective economic, regulatory and legal environment as well as the credit positions of the financial institutions that operate in this environment. Countries are classed according to their banking systems' strengths and weaknesses into ten tiers starting from least risky systems in tier 1 to the most risky in tier 10.

To obtain the rating S&P combines multiple factors that relate to the structure and performance of a country's economy, its legal and regulatory infrastructure underpinning the financial system, and the structure and credit culture of the country's banking industry itself. The score also reflects the quality and effectiveness of bank regulation and the track record of its central bank in financial crises management. The potential of targeted extraordinary government intervention for specific failing banks is excluded from the score.

A key element that accounts for the credit structure of banks is the proportion of gross problematic assets (GPA's), which reflect the country's potential proportion of credit to private entities and non-financial public firms that could become problematic in an economic crisis. GPAs include overdue loans, non-performing assets sold to special purpose vehicles and restructured debt including foreclosed assets (mainly real estate) recovered through loan rearrangements. This is intended to measure the potential severity of a systemic stress to the banking system and takes into consideration the historic GPAs proportion and subsequent behaviour of the banking sector in past downturns and recoveries. S&P classifies GPAs into one of six ranges – from 5% - 15% to 50% - 75% - expressed as a percentage of domestic private sector credit.

The tables below provide a more detailed look into the peer group's performance in this instrumental factor. According to S&P Korea's economic resilience is intermediate with low imbalances but high credit risk and this places Korea into a lower Tier (4) for economic risk:

Country	BICRA group	Economic resilience	Economic imbalances	Credit risk in the economy	Economic risk
Hong Kong	2	Very low	High	Low	3
Japan	2	Low	Very low	Low	2
Norway	2	Very low	Low	Low	2
Singapore	2	Very low	High	Low	3
Korea	3	Intermediate	Low	High	4
China	5	Intermediate	High	High	6

S&P's assessment of Korea's banking industry risk is more favourable. Korea's institutional framework and competitive dynamics are intermediate with low problems for system-wide funding.

Country	BICRA group	Institutional framework	Competitive dynamics	System-wide funding	Industry risk
Hong Kong	2	Very low	Low	Very low	1
Japan	2	Intermediate	Intermediate	Very low	3
Norway	2	Low	Low	Intermediate	3
Singapore	2	Very low	Low	Low	2
Korea	3	Intermediate	Intermediate	Low	3
China	5	High	High	Very low	5

Credit ratings and GPA ranges cannot be realistically influenced by government policy. However the legal and regulatory environment is also considered for the assessment of a country's bank system risk. The private sector (and especially the banking sector), which is the ultimate provider and user of banking credit would have a stronger influence on this instrumental factor. There is very little local authorities can do about influencing this index.

**Source:**

<http://www.standardandpoors.com/ratings/articles/en/us/?articleType=HTML&assetID=1245336109698>

**Global Power Cities Index, the Institute for Urban Strategies/Mori Memorial Foundation (2011)** – Busan is not ranked in this index and neither are Oslo and Shenzhen. Of the reminder, the peer group leader is Tokyo, which is 4<sup>th</sup> among GFCI centres, followed immediately by Singapore (5<sup>th</sup>), Seoul (6<sup>th</sup>) and Hong Kong (7<sup>th</sup>). Further down the ranking are Osaka in 13<sup>th</sup> place, Beijing in 16<sup>th</sup> and Shanghai at the 21<sup>st</sup>.

Global Power City Index	GFCI 14	GFCI 13	GFCI 12
Tokyo	4	4	4
Singapore	5	5	5
Seoul	6	6	6
Hong Kong	7	7	7
Osaka	13	13	13
Beijing	16	16	16
Shanghai	21	21	21
<b>Busan</b>	-	-	-
Oslo	-	-	-
Shenzhen	-	-	-

This index is created by a panel of scholars and experts in urban planning, under the leadership of the chairman of the Institute for Urban strategies at Tokyo. It is intended to assess the comprehensive power of cities to attract creative people and top notch companies from around the world. The index is compiled of two different measures, a function-specific one measuring the functional aspects of the cities, and an ‘actor’-specific one measuring the cities from the perspective of its citizens.

For the objective function-specific measure, cities are ranked in six broad areas (or functions) which represent the main strengths of a city:

- ◆ Economy – this indicator is driven by market attractiveness, economic vitality, business environment and regulations
- ◆ Research & Development – research background, readiness for accepting and supporting researchers, achievements
- ◆ Cultural Interaction – resources for attracting visitors, accommodation environment, shopping & dining, volume of interaction and trendsetting potential
- ◆ Liveability – accounts for working environment, cost of living, security & safety and life support functions
- ◆ Ecology and Natural Environment – pollution, ecology and natural environment
- ◆ Accessibility – inner city transportation and infrastructure supporting international transportation

In total, the survey has used 69 objective measures based on actual data of the cities compiled by the Mitsubishi Research Institute and reviewed by a panel of experts and academics at the Institute for Urban Strategies.

For the subjective actor-specific measure a range of evaluations were made from the perspectives of four global actors, who are presumed to lead urban activities in their cities:

- ◆ Managers – mostly affected by Economy and Liveability
- ◆ Researchers – mostly affected by R&D, Liveability and Cultural Interaction
- ◆ Artists – mostly affected by Cultural Interaction and Liveability
- ◆ Visitors – mostly affected by Accessibility and Cultural Interaction

- ◆ One local actor: “Residents” was also added to the global four; this actor puts greater weight on Liveability and Ecology & Natural Environment.

This index seems hard to influence by policymakers as it involves a significant number of objective as well as subjective measures. Many of the areas considered by this survey could be directly affected by local and national policies – business environment and regulations, readiness for accepting and supporting researchers, resources for attracting visitors, pollution, ecology and natural environment, inner city transportation and infrastructure supporting international transportation, security, safety and life support functions. It would be more difficult for the private sector to affect this index.

**Source:** <http://www.mori-m-foundation.or.jp/english/index.shtml>

**Office Occupancy Costs, DTZ (2012)** – Busan and Osaka are not rated in this instrumental factor. The peer group is lead by Shenzhen where office space is considerably cheaper than any other peer group centre. Seoul is a distant second in 34<sup>th</sup> place among GFCI centres followed relatively closely by Shanghai (39<sup>th</sup>) and Beijing (42<sup>nd</sup>). Singapore is 48<sup>th</sup>, Oslo 58<sup>th</sup>, Tokyo 62<sup>nd</sup> and Hong Kong is last in 64<sup>th</sup> place. It is worth noting that over the last three GFCI editions office occupancy costs in Seoul, Shanghai and Beijing have grown considerably faster than in other peer group centres.

Office Occupancy Costs	GFCI 14	GFCI 13	GFCI 12
Shenzhen	13	14	12
Seoul	34	27	25
Shanghai	39	31	29
Beijing	42	35	33
Singapore	48	48	45
Oslo	58	56	53
Tokyo	61	61	58
Hong Kong	64	64	61
<b>Busan</b>	-	-	-
Osaka	-	-	-

DTZ's fifteenth annual “Global Occupancy Costs: Offices” (GOCO) survey is a guide to total office occupancy costs across 124 business districts in 49 countries and territories worldwide. The report looks at the main components of occupancy costs in major office markets across the globe and provides a ranking based on annual costs per workstation paying due account to differences in space utilisation per workstation in all markets. This latest survey compares the total occupancy cost per workstation measured in USD as at end-2010 and end-2011 and provides forecasts of total occupancy costs to 2016. For the second time, this year’s report also analyses the cost of occupying secondary space in selected locations, as well as the impact of a downside economic scenario on global office rents.



The Global Market View provides various comparative figures for office occupancy costs in prime business locations throughout the world. The measure used for the GFCI is gross annual office rents in US dollars per work-station. A simple average of occupancy costs is taken where figures for various districts in one city are provided.

It is difficult to influence this index by either the public or the private sector as office rents are mostly a function of supply and demand forces, especially in market economies. Policy making in the form of cutting red tape and increasing planning permissions could reduce rents by increasing supply but this should be accompanied by infrastructure improvements to make new locations attractive to rent and is also subject to geographic constraints. Urban authorities are perhaps most capable (and interested) to influence this index.

**Source:**

[http://www.dtz.com/Global/Research/DTZ+Research+homepage?vgnLocale=en\\_GB](http://www.dtz.com/Global/Research/DTZ+Research+homepage?vgnLocale=en_GB)

**World Competitiveness Scoreboard, IMD (2013)** – In this country based survey Hong Kong and Singapore are the peer group leaders (ranked respectively 8<sup>th</sup> and 10<sup>th</sup>), followed closely by Oslo, which is 11<sup>th</sup>. China, South Korea and Japan are much further down the ranks with their centres respectively 41<sup>st</sup>, 45<sup>th</sup> and 48<sup>th</sup>. Mainland China overtook South Korea in 2013 and as a result Busan and Seoul fell from 42<sup>nd</sup> to 45<sup>th</sup> place; this is because China has three centres that are rated in GFCI so if the three of them share the 42<sup>nd</sup> position, then the centres ranked immediately after would come 45<sup>th</sup>. This can also explain Hong Kong staggering fall from 1<sup>st</sup> to 8<sup>th</sup> place. This is because Hong Kong was overtaken by the USA, which participates in the GFCI with five centres and Switzerland, which participates with two; in the actual scoreboard, which is country based, Hong Kong fell from 1<sup>st</sup> to 3<sup>rd</sup> place.

World Competitiveness Scoreboard	GFCI 14	GFCI 13	GFCI 12
Hong Kong	8	1	1
Singapore	10	9	9
Oslo	11	16	16
Beijing	41	43	43
Shanghai	41	43	43
Shenzhen	41	43	43
<b>Busan</b>	<b>45</b>	<b>42</b>	<b>42</b>
Seoul	45	42	42
Osaka	48	50	49
Tokyo	48	50	49

The World Competitiveness Scoreboard is compiled by IMD, a leading global business school based in Geneva, ranks 59 economies into a competitiveness scoreboard based on 331 various criteria divided into four broad sub-groups:

- ◆ Economic Performance which measures size, growth, wealth and forecasts for the domestic economy, international trade, international investment, employment and price levels.



- ◆ Government Efficiency measures business legislation in terms of openness, competition and labour regulations, the institutional framework, fiscal policy, public finance and societal framework.
- ◆ Business Efficiency reflects business productivity, efficiency, management practices, attitudes and values, financial management, bank and stock market efficiency as well as costs, relations and availability of skills in the labour market.
- ◆ Infrastructure measures basic, scientific and technological infrastructure as well as health, environment and education.

IMD offers detailed country profiles, which would help to better understand the country's position with regards to the various measures used to compile the overall index. A more detailed look into the index' constituent parts may help policymakers better understand where changes can be made to improve performance. Local authorities' influence over this instrumental factor can be at best limited to local infrastructure (especially scientific and technological) environment and education.

**Source:** [www.imd.ch/research](http://www.imd.ch/research)

**Global Competitiveness Index, World Economic Forum (2012)** – Singapore leads the peer group in this country-based instrumental factor and ranks third among GFCI centres. Hong Kong and the Japanese centres follow at a considerable distance in 24<sup>th</sup> and 25<sup>th</sup> places. Oslo is 30<sup>th</sup>, Busan and Seoul 38<sup>th</sup> and the Chinese centres are the laggards of the peer group, sharing 50<sup>th</sup> place. It is noteworthy that unlike the IMD Scoreboard, which also measures countries' competitiveness, Korea's scores exhibit an improvement. There is also a significant difference in how the two methodologies assess Hong Kong, Japan and China: where Hong Kong is significantly behind Singapore and the top positions according the WEF, it is near the top according the IMD; and where China, South Korea and Japan are all clustered close to each other with China leading and Japan lagging according to the IMD, China is the undisputed laggard of the three and far behind South Korea and Japan according to the WEF.

Global Competitiveness Index	GFCI 14	GFCI 13	GFCI 12
Singapore	3	3	3
Hong Kong	24	24	27
Osaka	25	25	14
Tokyo	25	25	14
Oslo	30	30	35
<b>Busan</b>	<b>38</b>	<b>38</b>	<b>44</b>
Seoul	38	38	44
Beijing	50	49	46
Shanghai	50	49	46
Shenzhen	50	49	46

The Global Competitiveness Index rankings are drawn from a combination of publicly available hard data and the results of the Executive Opinion Survey, a comprehensive annual survey conducted by the World Economic Forum, together with its network of partner institutes. It ranks 144 countries, according to 12 broad indicators that the WEF refers to as the 12 pillars of competitiveness:

- ◆ Institutions – this measures the efficiency of the legal and administrative environment and how conducive it is to competitiveness and wealth creation. The measure factors in overregulation, lack of transparency, political independence of the judiciary and quality of public finances management;
- ◆ Infrastructure – this measure covers how well developed is a country's electricity supply, transportation and communication networks;
- ◆ Macroeconomic environment – this measure covers fiscal deficits and budget balances, which influence the government's ability to meet potential future crises and react to business cycles. It also accounts for inflation, credit rating, interest rate spread and national savings rate;
- ◆ Health and primary education – this is considered the last of the 4 basic pillars of competitiveness. A country should have a healthy and literate workforce in order to grow its economy and be productive. The measure considers investment and quality of healthcare, life expectancy, infant mortality and primary education enrolment rates amongst other measures;
- ◆ Higher education and training – this pillar measures secondary and tertiary education enrolment rates, the quality of education as evaluated by the business community and the extent of staff training;
- ◆ Goods market efficiency – this measure accounts for domestic and foreign competition as well as the degree of customer orientation and buyers' sophistication;
- ◆ Labour market efficiency – amongst the measures included in this pillar are the flexibility of wage determination, employer-worker relations, rigidity of employment, redundancy costs as well as some measures that account for the efficient use of talent;
- ◆ Financial market sophistication – this pillar broadly accounts for the efficiency and trustworthiness of financial markets. Amongst the measures considered are affordability and availability of financial services, ease of access to loans and financing, restrictions of capital flows and some regulation measures;
- ◆ Technological readiness – this pillar measures the availability of latest technologies, their adoption at the firm level, FDI and technology transfer as well as use of information and telecommunications technologies;
- ◆ Market size – this pillar measures the sizes of both the domestic and foreign markets available to local businesses;
- ◆ Business sophistication – the last two pillars are particularly important for knowledge based economies, i.e. ones that have already utilized the more basic sources of productivity covered by the other 10 pillars. Business sophistication concerns the quality of the country's business networks and supporting industries. This is measured by the

quality and quantity of local suppliers, the extent of their interaction, formation of business clusters, value chain breadth, and extent of marketing;

- ◆ Innovation – the last measure uses indicators like quality of scientific research institutions, company spending on R&D, university-industry collaboration, patents and protection of intellectual property.

The weightings on the pillars differ in accordance to a country's stage of development. The pillars are separated into three groups – the first four are basic requirements that are key (and have bigger weightings) for factor driven economies or countries at a low stage of economic development; the next 6 form the efficiency enhancers group and are key for efficiency driven economies or most developing countries; the last two form innovation and sophistication factors that are key for innovation driven economies or most of the developed countries.

The table below provides a detailed look into the three different competitiveness pillars of the peer group. Rankings in these tables pertain countries participating in the WEF's survey and are not limited to GFCI centres only.

Basic Requirements	Institutions	Infrastructure	Macro-economy	Health & Primary	Overall (Basic)	WEF Rank
Singapore	1	2	17	3	1	2
Hong Kong	10	1	15	26	3	9
Norway	8	27	3	18	9	15
Korea, Rep.	62	9	10	11	18	19
Japan	22	11	124	10	29	10
China	50	48	11	35	31	29

Korea's institutional environment is an apparent weakness according to this survey but infrastructure, macroeconomic environment, healthcare and primary education can be considered strengths.

Efficiency Enhancers	Higher Education	Goods Market	Labour Market	Financial Market	Tech Readiness	Market Size	Overall Efficiency	WEF Rank
Singapore	2	1	2	2	5	37	1	2
Hong Kong	22	2	3	1	4	26	3	9
Japan	21	20	20	36	16	4	11	10
Norway	12	28	18	7	13	50	16	15
Korea, Rep.	17	29	73	71	18	11	20	19
China	62	59	41	54	88	2	30	29

Korea's market size (which accounts not just for internal but also access to external markets) is the strongest efficiency pillar followed by its higher education and technological readiness. Where it could use improvement is the efficiency of its labour and financial markets.

Innovation & Sophistication	Business Sophistication	Innovation	Overall (Innovation)	WEF Rank
Japan	1	5	2	10
Singapore	14	8	11	2
Norway	19	15	16	15
Korea, Rep.	22	16	17	19
Hong Kong	17	26	22	9
China	45	33	34	29

Korea ranks better in innovation than in business sophistication but in both these measures it scores relatively well so they can be considered strengths.

There are many inputs to this index that can be influenced by policy makers mostly at the national level but also many inputs that are predominantly dependent on the private sector. Korea scores relatively well in the factors that can be efficiently affected at the local level: namely higher education, business sophistication and innovation.

Source: [www.weforum.org](http://www.weforum.org)

**Instrumental Factors from the World Federation of Stock Exchanges (2013)** – The World Federation of Exchanges provides a monthly newsletter called Focus, which contains monthly statistics tables. The GFCI uses nine different statistics from this report. For all of the indicators, the latest available year-to-date figures were used; for instances where more than one exchange per city participated in the Focus report the amounts were added together<sup>4</sup>. Only the first six of these measures are included in the top 40 of instrumental factors as ranked by their R-squared with GFCI 14. Nonetheless we believe these factors are of particular interest to Busan as the home of Korea Exchange so review all nine below.

**Volume of Stock Futures Traded** – this represents the number of trades in stock futures for each participating stock exchange where those derivatives are traded. Busan is 11<sup>th</sup> among GFCI centres and so ahead of Oslo Borse at the 19<sup>th</sup> place, but behind Hong Kong and Tokyo – respectively 2<sup>nd</sup> and 3<sup>rd</sup>. Busan's slide from 2<sup>nd</sup> place in GFCI 12 to 11<sup>th</sup> in GFCI 13 is not only due to the lower volume of stock futures trading it reported. Reported volumes in Hong Kong have risen enormously between GFCI 12 and 13; also in GFCI 13 Tokyo made a strong entrance along with Mumbai, Chicago, Zurich, Frankfurt and a few others, which previously had not reported their stock futures' trade volumes.

Volume of Stock Futures Trading	GFCI 14	GFCI 13	GFCI 12
Hong Kong	2	4	8
Tokyo	3	5	
<b>Busan</b>	<b>11</b>	<b>11</b>	<b>2</b>

<sup>4</sup> This technique was used for all of these stock exchange related measures except for Broad Stock Index Levels where a simple average was used.

Volume of Stock Futures Trading	GFCI 14	GFCI 13	GFCI 12
Oslo	19	18	5
Beijing	-	-	-
Osaka	-	-	-
Seoul	-	-	-
Shanghai	-	-	-
Shenzhen	-	-	-
Singapore	-	-	-

**Commodity Futures Notional Turnover** – measures the number of commodity futures contracts traded multiplied by the contracts’ notional values (at market prices). Busan is the only centre of the peer group that has a rating in this instrumental factor; it is ranked 15<sup>th</sup> among GFCI centres in GFCI 14 and 13 and 7<sup>th</sup> in GFCI 12.

**Volume of Stock Options Traded** – the number of trades in stock options for each participating stock exchange where those derivatives are traded. Busan is not ranked in this instrumental factor. Hong Kong and Tokyo lead the peer group taking respectively 5<sup>th</sup> and 6<sup>th</sup> places among GFCI centres. Oslo is further down the ranking at 17<sup>th</sup> and Osaka is 22<sup>nd</sup>.

Volume of Stock Options Trading	GFCI 14	GFCI 13	GFCI 12
Hong Kong	5	5	2
Tokyo	6	6	8
Oslo	17	18	7
Osaka	22	24	11
Beijing	-	-	-
<b>Busan</b>	-	-	-
Seoul	-	-	-
Shanghai	-	-	-
Shenzhen	-	-	-
Singapore	-	-	-

**Capitalisation of Stock Exchanges** – the entire amount of shares listed on the stock exchange measured in US dollars (excluding investment funds). Busan is in the middle of the peer group ranking in 14<sup>th</sup> place, a little after Shenzhen, which is 10<sup>th</sup> and before Singapore, which is 19<sup>th</sup>. Tokyo is the leader of the group in 2<sup>nd</sup> position among GFCI centres followed closely by Hong Kong in 5<sup>th</sup> and Shanghai in 6<sup>th</sup> place. The smaller exchanges of Osaka (28<sup>th</sup>) and Oslo (30<sup>th</sup>) are at the bottom of the rankings.

Capitalisation of Stock Exchanges	GFCI 14	GFCI 13	GFCI 12
Tokyo	2	2	3
Hong Kong	5	5	4
Shanghai	6	6	5
Shenzhen	10	14	12

Capitalisation of Stock Exchanges	GFCI 14	GFCI 13	GFCI 12
<b>Busan</b>	<b>14</b>	<b>13</b>	<b>14</b>
Singapore	19	20	20
Osaka	28	30	28
Oslo	30	28	27
Beijing	-	-	-
Seoul	-	-	-

**Commodity Options Notional Turnover** – the number of commodity options contracts traded multiplied by the contracts' notional values (at market prices). None of the peer group centres is ranked in this instrumental factor.

**Value of Share Trading** – the total US dollar value of equity securities traded on each participant city's stock exchange for the last month, for which data was available. Busan takes 4<sup>th</sup> position in the peer group and is ranked 9<sup>th</sup> among GFCI centres just ahead of Hong Kong, which is 10<sup>th</sup>. Tokyo, Shenzhen and Shanghai are the peer group leaders at 2<sup>nd</sup>, 3<sup>rd</sup> and 4<sup>th</sup> places respectively. Osaka, Singapore and Oslo are further down the ranks at 16<sup>th</sup>, 23<sup>rd</sup> and 28<sup>th</sup> places respectively.

Value of Share Trading	GFCI 14	GFCI 13	GFCI 12
Tokyo	2	2	2
Shenzhen	3	4	4
Shanghai	4	3	3
<b>Busan</b>	<b>9</b>	<b>7</b>	<b>7</b>
Hong Kong	10	9	11
Osaka	16	24	25
Singapore	23	22	22
Oslo	28	28	24
Beijing	-	-	-
Seoul	-	-	-

**Volume of Share Trading** – the total number of equity securities traded on each participant city's stock exchange for the last month, for which data was available. Busan is 3<sup>rd</sup> in this instrumental factor and 5<sup>th</sup> among GFCI centres closely followed by Tokyo in 6<sup>th</sup> place. Shenzhen is the peer group leader in 3<sup>rd</sup> place and Shanghai is 4<sup>th</sup>. Hong Kong is significantly behind Tokyo in 12<sup>th</sup> place and Oslo is the peer group laggard in 26<sup>th</sup> place. It is worth noting that Busan was the peer group leader in GFCI 12 but has since been overtaken by the Chinese centres by volume of shares traded.

Volume of Share Trading	GFCI 14	GFCI 13	GFCI 12
Shenzhen	3	4	5
Shanghai	4	3	4
<b>Busan</b>	<b>5</b>	<b>5</b>	<b>3</b>

Volume of Share Trading	GFCI 14	GFCI 13	GFCI 12
Tokyo	6	6	6
Hong Kong	12	10	13
Oslo	26	26	24
Beijing	-	-	-
Osaka	-	-	-
Seoul	-	-	-
Singapore	-	-	-

**Value of Bond Trading** – the total US dollar value of fixed income securities (bonds) that are traded on each participant city's stock exchange for the last month, for which data was available. Busan is the peer group leader, ranked 5<sup>th</sup> among GFCI centres and closely followed by Osaka in 6<sup>th</sup> place. Shanghai and Shenzhen are further down the rankings at 12<sup>th</sup> and 18<sup>th</sup> places, Tokyo is 23<sup>rd</sup> and Hong Kong is the peer group laggard in 28<sup>th</sup> place.

Value of Bond Trading	GFCI 14	GFCI 13	GFCI 12
<b>Busan</b>	<b>5</b>	<b>5</b>	<b>5</b>
Oslo	6	6	9
Shanghai	12	10	13
Shenzhen	18	16	17
Tokyo	23	22	21
Hong Kong	28	24	28
Beijing	-	-	-
Osaka	-	-	-
Seoul	-	-	-
Singapore	-	-	-

**Broad Stock Index Levels** – the level of the stock index that is traded on a city's stock exchange, which is generally used by market analysts as a proxy of the level of overall stock market activity. Hong Kong leads the group in 5<sup>th</sup> place with the remaining centres significantly further behind but close to each other. Singapore is 20<sup>th</sup> followed by Shanghai (21<sup>st</sup>), Busan (22<sup>nd</sup>), Osaka (25<sup>th</sup>) and Shenzhen (28<sup>th</sup>). Oslo is the peer group laggard in 36<sup>th</sup> place.

Broad Stock Index Levels	GFCI 14	GFCI 13	GFCI 12
Hong Kong	5	6	6
Singapore	20	23	23
Shanghai	21	26	25
<b>Busan</b>	<b>22</b>	<b>27</b>	<b>27</b>
Osaka	25	34	35
Tokyo	27	37	37
Shenzhen	28	36	32
Oslo	36	46	46
Beijing	-	-	-
Seoul	-	-	-



Busan ranks relatively high in terms of volume and value of trading of diverse financial instruments. Its rank is not as high in terms of stock market capitalisation, an indicator that it has ample room to attract more capital to Korea Exchange.

The influenceability of these measures is very limited and they could be quite volatile. Over the long run, policies at the national level designed to further liberalise financial markets and attract more capital flows could yield substantial results. Examples of such policies are a simple, transparent, predictable and efficient legal, regulatory and institutional environment, favourable tax treatment, simple listing rules, internationally recognised reporting requirements and international promotion activities.

**Source:** [www.world-exchanges.org](http://www.world-exchanges.org)

**Global City Image & Number of Greenfield Investments, KPMG (2012)** – half of the peer group centres, including Busan, are not ranked in this instrumental factor.

The study itself has been commissioned by the Greater Paris Investment Authority and developed by KPMG. It has been originally designed to compare and benchmark the present and future attractiveness of Greater Paris as an investment destination. It also endeavours to make a distinction between perceptions and reality of investment decision-making. To measure perceptions, the survey polls a representative sample of 512 companies in 25 countries, which have international business settlements. To measure reality, the survey measures the number of published international “greenfield” investments that took place in a particular city; a greenfield investment occurs when a business launches a new activity in a particular location.

The Global Financial Centres Index takes three different measures from this report (listed below in order of importance as measured by their R-squared with GFCI 14):

**Global City Image** is part of the perceptions’ survey. It measures how many business leaders (of the 512 companies investigated) pointed to a city in response to the question: “According to you, which three cities or major world capitals have the best overall image?”. Tokyo is the peer group leader for GFCI 14 where it climbed from 7<sup>th</sup> to 4<sup>th</sup> place overtaking Shanghai, Hong Kong and Singapore, which all lost a place to become 5<sup>th</sup>, 6<sup>th</sup> and 7<sup>th</sup> respectively. Beijing was first featured in GFCI 14, where it entered at number 10.

City Global Image	GFCI 14	GFCI 13
Tokyo	4	7
Shanghai	5	4
Hong Kong	6	5
Singapore	7	6
Beijing	10	
<b>Busan</b>	-	-



City Global Image	GFCI 14	GFCI 13
Osaka	-	-
Oslo	-	-
Seoul	-	-
Shenzhen	-	-

**Number of Greenfield Investments** is part of the objective data survey (the reality survey). It measures the number of foreign greenfield investments a made in a particular city; i.e. instances when international businesses have started a new activity there, which is usually considered a direct (as opposed to portfolio) investment. Here Shanghai and Hong Kong are the peer group leader at 2<sup>nd</sup> and 3<sup>rd</sup> place respectively. Beijing comes next in 7<sup>th</sup> place, followed by Tokyo at 13<sup>th</sup> and Seoul in 16<sup>th</sup> place.

Number of Greenfield Investments	GFCI 14	GFCI 13
Shanghai	2	2
Hong Kong	3	3
Beijing	7	7
Tokyo	13	13
Seoul	16	16
<b>Busan</b>	-	-
Osaka	-	-
Oslo	-	-
Shenzhen	-	-
Singapore	-	-

**Global Cities Weight in National Incoming Investments** is also part of the reality survey. It measures the share of greenfield investment a particular city receives as compared to the rest of the country. This instrumental factor is (perhaps oddly) not nearly as influential as the other two. It is 98<sup>th</sup> in terms of R-squared to GFCI 14.

Public authorities can influence these instrumental factors through raising the general awareness of the qualities of their financial centre and investing in promotion. If this is matched by the appropriate investment environment, then all things being equal, centres that are more internationally recognised will also fare better in terms of Greenfield investments and will receive a larger share of the country's investments.

**Source:**

<http://www.kpmg.com/FR/fr/IssuesAndInsights/ArticlesPublications/Documents/Observatoire-des-Investissements-Internationaux-principales-metropoles-mondiales-2013.pdf>

**Global Cities Index, AT Kearney (2012)** – Busan and Oslo are not rated in this instrumental factor. Tokyo leads the peer group in 4<sup>th</sup> place followed immediately by Hong Kong at 5<sup>th</sup> and Seoul in 7<sup>th</sup>. Singapore and Beijing are close behind in 7<sup>th</sup> and 10<sup>th</sup> places respectively,

while Shanghai is further behind in 19<sup>th</sup> place. Osaka and Shenzhen are significantly behind the rest of the centres in 41<sup>st</sup> and 48<sup>th</sup> places respectively.

Global Cities Index	GFCI 14	GFCI 13	GFCI 12
Tokyo	4	4	4
Hong Kong	5	5	5
Seoul	7	7	7
Singapore	10	10	10
Beijing	13	13	13
Shanghai	19	19	19
Osaka	41	41	41
Shenzhen	48	48	47
<b>Busan</b>	-	-	-
Oslo	-	-	-

The Global Cities Index is a measure of the cities' international status and their influence on the rest of the world; that encompasses the cities hosts to the biggest capital markets, most elite universities, most powerful international organisations, wealthiest multinationals and most diverse and well-educated populations. The survey ranks 66 cities according to 25 diverse indicators grouped into five broad dimensions:

- ◆ Business activity – measures the value of a city's capital markets, the number of Fortune 500 firms headquartered and the volume of goods that pass through the city.
- ◆ Human capital – includes the size of a city's immigrant population, number of international schools and percentage of citizens with university degrees
- ◆ Information exchange – the number of international news agencies, amount of international news in local newspapers and the number of broadband subscribers
- ◆ Cultural experience – includes measures that reflect the level of diverse attractions that the city can offer for residents and travellers – everything from major sporting events to the number of performing arts venues
- ◆ Political engagement – this measure includes the number of embassies and consulates, major think-tanks, international organisations, sister city relationships and political conferences a city hosts.

This ranking is harder to influence by policymaking, however creating the right environment that facilitates business and knowledge creation is pivotal. Political engagement seems to be the area most susceptible to policymaking.

**Source:** <http://www.atkearney.com/index.php/Publications/global-cities-index.html>

**Price Levels & Wage Comparison Index, UBS (2012)** – Busan, Osaka and Shenzhen are not ranked in either of these instrumental factors and Singapore has been withdrawn from the last edition. Shanghai leads the group in price levels (ranked 15<sup>th</sup> among GFCI centres), meaning it has the lowest prices among the peer group centres, while Beijing leads the wage levels survey (ranked 7<sup>th</sup> among GFCI centres) meaning it offers the lowest wages among the

peer group. Given that prices in Shanghai are lower than in Beijing but wages are higher, we can conclude that the purchasing power for a professional working in Shanghai is higher.

We witness the same dynamic for Seoul and Hong Kong: prices in Seoul are lower than in Hong Kong while wages are higher. However it is worth noting that Seoul and Hong Kong are similarly ranked in terms of prices and wages compared to other GFCI centres: Seoul is 26<sup>th</sup> and 30<sup>th</sup> in process and wages, while Hong Kong is 30<sup>th</sup> in prices and 26<sup>th</sup> in wages. The Chinese centres' places in the two rankings however are quite different: Shanghai is 15<sup>th</sup> in prices but only 9<sup>th</sup> in wages, while Beijing is 18<sup>th</sup> in prices but only 7<sup>th</sup> in wages. This suggests that the purchasing power of the Chinese centres is on average poorer than in Korea or Hong Kong. Tokyo and Oslo are far more expensive than the rest but also pay higher wages.

Price Levels	GFCI 14	GFCI 13	GFCI 12
Shanghai	15	15	12
Beijing	18	18	7
Seoul	26	26	24
Hong Kong	30	30	22
Tokyo	53	53	47
Oslo	55	55	52
Singapore	-	-	43
<b>Busan</b>	-	-	-
Osaka	-	-	-
Shenzhen	-	-	-

Wage Comparison Index	GFCI 14	GFCI 13	GFCI 12
Beijing	7	7	6
Shanghai	9	9	8
Hong Kong	26	26	18
Seoul	30	30	25
Tokyo	48	48	37
Oslo	52	52	50
Singapore	-	-	19
<b>Busan</b>	-	-	-
Osaka	-	-	-
Shenzhen	-	-	-

The “Prices and Earnings” survey of UBS compares purchasing power in the world’s major cities. It has three main measures – price levels, wage levels and domestic purchasing power. The GFCI uses the first two as separate instrumental factors intended to measure the cost of living and the cost of labour (but also wage attractiveness) respectively. Both feature in the top 40 instrumental factors by R-squared and we have reviewed them below.

Price levels ranks cities according to cost of living adjusted for exchange rates. It compares the prices of a standardised basket of goods and services, comprising 122 items and based mostly on European consumer habits; substitutes were used where needed. Unlike other cost of living surveys, which convert local prices to US dollars, this ranking bases its estimates on a “common currency” and uses an exchange rate averaged over the period of data collection to avoid daily fluctuations. It should be noted however that long term exchange rates do affect the price levels as does inflation.

The Wage Comparison Index compares the earnings of workers across cities. It provides a gross wage comparison (used for GFCI) and a net wage comparison, using New York as the base city (with an index of 100). The index covers 14 occupations that represent a cross section of the work force in the industrial and service sectors. It is based on questionnaires sent to a number of companies in the relevant sector for each city that take into account age, personal status, education and length of employment. The survey reflects annual gross income including profit sharing, bonuses, holiday pay, additional months’ salaries payments and family allowances measured in US dollars. There is also classification of net income, i.e. gross income after taxes and social security contributions.

Busan is not rated by UBS but Seoul seems to be in a competitive position compared to the rest of the peer group and we could plausibly assume that this low-cost but good purchasing power condition holds for Busan as well.

Prices and wages are mostly affected by supply and demand forces as well as productivity levels. Policy makers can influence both these factors directly (through minimum wage regulation, earnings taxes, corporate taxes and VAT) and indirectly (through crafting policies to improve the productivity of the economy). In either case the influenceability could be counterproductive over the long run.

**Source:**

[http://www.ubs.com/1/e/wealthmanagement/wealth\\_management\\_research/prices\\_earnings.html](http://www.ubs.com/1/e/wealthmanagement/wealth_management_research/prices_earnings.html)

**Innovation Cities Global Index, 2 Think Now (2013)** – Busan is ranked 54<sup>th</sup> among GFCI centres and is behind the rest of the peer group by a large margin. Hong Kong is the peer group leader, ranked 11<sup>th</sup>, followed closely by Seoul, which is 16<sup>th</sup>. Tokyo comes next in 18<sup>th</sup> place, followed by Shanghai (21<sup>st</sup>), Singapore (22<sup>nd</sup>), Oslo (28<sup>th</sup>), Osaka (30<sup>th</sup>), Beijing (31<sup>st</sup>) and Shenzhen (37<sup>th</sup>).

Innovation Cities Global Index	GFCI 14	GFCI 13 <sup>5</sup>	GFCI 12
Hong Kong	11	12	12
Seoul	16	21	21
Tokyo	18	17	17

<sup>5</sup> Previous editions of the Innovation Cities Global Index have only provided top 125 rankings with Busan ranked 130<sup>th</sup>. St Petersburg was the last of the GFCI centres at 122<sup>nd</sup> place in the index and 51<sup>st</sup> among GFCI centres. Busan would have come next, i.e. 52<sup>nd</sup> among GFCI centres, as there were no GFCI centres ranked 123-129 by 2ThinkNow

Shanghai	21	19	19
Singapore	22	20	20
Oslo	28	26	26
Osaka	30	31	31
Beijing	31	34	34
Shenzhen	37	45	45
<b>Busan</b>	<b>54</b>	<b>52</b>	<b>52</b>

2Think Now is the world's first innovation agency that has created its own unique algorithms, metrics and data tools for measurement and comparison of cities and businesses. For the Innovation Cities Index the agency has used 162 unique data points for each city, combined into 31 broader industry and community segments. Each of these segments is determined as a sector of an urban economy and thus a driver of jobs, community and economic activity). These are not however distinct economic sectors (e.g. retail, automobile or telecommunication) but rather broader and more comprehensive measures that attempt to encompass all aspects of everyday life: Government & politics, Business, Logistics, Industry & manufacturing, Sports & fitness, Geography, Arts, Utilities, Environment, Fashion, Health, Education, etc. The Index is designed to help innovators determine which cities are generally the best places to start innovating in a given year.

This is how the peer group centres are classified in 2ThinkNow's survey:

Centre	2Think Now Rank	Classification	Notes
Hong Kong	14	1 NEXUS	Critical nexus for multiple economic and social innovation segments
Seoul	21	1 NEXUS	Critical nexus for multiple economic and social innovation segments
Tokyo	25	1 NEXUS	Critical nexus for multiple economic and social innovation segments
Shanghai	29	1 NEXUS	Critical nexus for multiple economic and social innovation segments
Singapore	30	1 NEXUS	Critical nexus for multiple economic and social innovation segments
Oslo	38	2 HUB	Dominance or influence on key economic and social innovation segments , based on global rends
Osaka	47	2 HUB	Dominance or influence on key economic and social innovation segments , based on global rends
Beijing	53	2 HUB	Dominance or influence on key economic and social innovation segments , based on global rends
Shenzhen	71	2 HUB	Dominance or influence on key economic and social innovation segments , based on global rends
<b>Busan</b>	<b>164</b>	<b>3 NODE</b>	<b>Broad performance across many innovation segments, with key imbalances</b>

Looking at the overall rankings (as opposed to just GFCI-rated centres) exposes a significant lag between Busan and the rest of the peer group. What this means according to 2ThinkNow

is that an innovator living in Busan can't innovate but this innovation is likely to have regional as opposed to global significance<sup>6</sup>.

The survey is innovative and interesting but quite complex, very broad-based and with a great number of inputs. It is therefore very difficult to influence by policy making at any level, especially given the opaque methodology.

**Source:** <http://www.innovation-cities.com/>

**Financial Secrecy Index, Tax Justice Network (2011)** – Busan and Seoul lead the peer group by a wide margin as the least secretive jurisdictions rated in this instrumental factor; they are ranked 17<sup>th</sup> among GFCI centres. The reminder of the peer group centres are much further down the ranks with Japanese centres 42<sup>nd</sup>, Singapore 45<sup>th</sup> and Hong Kong 51<sup>st</sup>.

Financial Secrecy Index	GFCI 14	GFCI 13	GFCI 12
<b>Busan</b>	<b>17</b>	<b>17</b>	<b>16</b>
Seoul	17	17	16
Osaka	42	41	39
Tokyo	42	41	39
Singapore	45	44	42
Hong Kong	51	50	48
Beijing	-	-	-
Oslo	-	-	-
Shanghai	-	-	-
Shenzhen	-	-	-

Launched on October 4<sup>th</sup> 2011, the Financial Secrecy index provides a measure of corruption, illicit financial flows and overall financial secrecy. The index highlights those places which give the greatest security, in terms of tax havens to tax refugees. Countries and territories are ranked according to the level of secrecy of their financial activities (derived from 15 key financial secrecy indicators) combined with their scale (a weighting based on their share of the global market for offshore financial services).

The key financial secrecy indicators (KFSI) draw on data collected from an array of regulatory reports, legislation, regulation and news available. They encompass 15 different qualitative assessments split into four groups:

- ◆ Transparency of Beneficial Ownership – relates to banking secrecy, the availability of public trusts and foundations register, and of company beneficial ownership records;
- ◆ Corporate Transparency Regulation – relates to whether the authorities make publicly available company accounts and ownership and if companies listed on a national stock exchange are required to comply with country-by-country financial reporting;

<sup>6</sup> <http://www.innovation-cities.com/innovation-cities-index-2012-faq/7247>

- ◆ Efficiency of Tax & Financial Regulation – relates to whether the jurisdiction avoids promoting tax evasion, is fit for tax information exchange, allows cell companies and trusts with flee clauses and the overall tax administration efficiency;
- ◆ International Standards and Cooperation – relates to anti-money laundering (compliance with FATF), international transparency commitments, international judicial cooperation, bilateral treaties and participation in automatic information exchange.

The table below is a summary of the peer group's secrecy scores and their relative weight. The secretive scores are split into seven tiers with Tier 1 being "moderately secretive" and Tier 7 being "exceptionally secretive". There are also four categories of weighting – tiny, small, large and huge – which depend on a centre's relative share of the global market for offshore financial services.

Financial Secrecy Index	Secretive Scores	Size
<b>Korea</b>	Tier 3 (51-60)	Tiny (under 1%)
Japan	Tier 4 (61-70)	Small (around 2%)
Singapore	Tier 5 (71-80)	Small (over 3%)
Hong Kong	Tier 5 (71-80)	Large (over 4%)
China	-	-
Norway	-	-

Korea scores better than all peer group jurisdictions, which points to a more transparent financial system. It also has the lowest share of global market off-shore services, which could indicate a potential opportunity.

Clearly this instrumental factor is wholly subject to government policy makers and is therefore highly influenceable at the national level.

**Source:** <http://www.financialsecrecyindex.com/2011results.html>

**Citizens Purchasing Power, City Mayors (2012)** – Busan, Osaka and Shenzhen are not rated in this instrumental factors and Singapore has not received any rating for the last two GFCI editions. Tokyo leads the group in 9<sup>th</sup> place, closely followed by Seoul, which is 12<sup>th</sup>. Hong Kong and Oslo are further down the ranking in 20<sup>th</sup> and 21<sup>st</sup> places respectively and the Chinese centres are the peer group laggards with Shanghai at the 45<sup>th</sup> and Beijing in 52<sup>nd</sup> place. The findings of this instrumental factor are consistent with our findings in UBS' price and wage levels survey: while Tokyo and Oslo were much more expensive than Hong Kong and Seoul, the citizens' purchasing power in the four centres is close to each other than the Chinese centres. All things being equal cheaper locations are more attractive for any business and financial services is not an exception.

Citizens Domestic Purchasing Power	GFCI 14	GFCI 13	GFCI 12
Tokyo	9	9	9
Seoul	12	12	29
Hong Kong	20	20	28



Citizens Domestic Purchasing Power	GFCI 14	GFCI 13	GFCI 12
Oslo	21	21	23
Shanghai	45	45	46
Beijing	52	52	48
Singapore	-	-	40
<b>Busan</b>	-	-	-
Osaka	-	-	-
Shenzhen	-	-	-

This indicator measures the purchasing power of the citizens of 73 cities across the world. It is based on average earnings per city and a general basket of 154 goods and services based on Western European consumer preferences. Higher purchasing power implies a better standard of living and quality of local services available.

This factor ultimately is a combination of earnings and cost and it can be therefore influenced in similar ways to what we already described for UBS Price and Wage Levels.

**Source:** <http://www.citymayors.com/economics/usb-purchasing-power.html>

**Connectivity & City Infrastructure, Economist Intelligence Unit (2012)** – Busan and Oslo are not ranked in these instrumental factors, which represent sub-indices taken from EIU’s “Best Cities Ranking” report. The overall Best Cities score, also known as the Spatial Adjusted Liveability Index, is itself an instrumental factor in its own right but does not feature in the Top 40 instrumental factors by R-squared with GFCI 14.

The Spatial Adjusted Liveability Index was created as a complementary addition to the existing EIU Liveability Index in order to incorporate spatial characteristics of participant cities. The initial liveability survey weighed up 30 factors, which broadly corresponded to five categories – including social stability, infrastructure, education, healthcare and culture. The new method looks at qualities such as connectivity, isolation, the amount of green space, urban sprawl, levels of pollution, natural and cultural assets, which represent indiscriminate qualities that the whole population can enjoy or suffer from. The spatial factors were given a 25% weighting thereby diminishing the other factors to a combined weighting of 75%.

The factors that feature in the Top 40 by R-squared to GFCI 14 are reviewed below:

**Connectivity** – a measure of how easy it is to connect between cities, part of the spatial factors. The two measures of connectivity used are: the average number of daily flights leaving from the city and how many other cities can be flown to from there. These two scores were averaged to obtain the final connectivity score. Tokyo and Seoul are the peer group leaders taking respectively the 4<sup>th</sup> and 9<sup>th</sup> positions among GFCI centres. Next comes Beijing ranked 14<sup>th</sup> and followed by Hong Kong, Osaka, Shanghai and Singapore, which all share the 18<sup>th</sup> place. Shenzhen lags the rest of the peer group in 38<sup>th</sup> place.



Connectivity	GFCI 14	GFCI 13	GFCI 12
Tokyo	4	4	4
Seoul	9	9	9
Beijing	14	14	14
Hong Kong	18	18	18
Osaka	18	18	18
Shanghai	18	18	18
Singapore	18	18	18
Shenzhen	38	38	36
<b>Busan</b>	-	-	-
Oslo	-	-	-

**City Infrastructure** – this is an EIU rating developed for its Liveability index. It is a combination of qualitative measures relating to road network, public transport, international links, quality housing, energy & water provision and telecommunications. This measure was first used as a separate instrumental factor for GFCI 13. Singapore leads both the peer group and the GFCI centres, closely followed by Hong Kong and Osaka in 3<sup>rd</sup> place. Tokyo is further down the ranking in 10<sup>th</sup> place followed by Seoul (14<sup>th</sup>), Beijing (19<sup>th</sup>) and Shenzhen (25<sup>th</sup>). Shanghai takes the last place in the peer group and is 31<sup>st</sup> among the GFCI centres.

Infrastructure	GFCI 14	GFCI 13
Singapore	1	1
Hong Kong	3	3
Osaka	3	3
Tokyo	10	10
Seoul	14	14
Beijing	19	19
Shenzhen	25	25
Shanghai	31	31
<b>Busan</b>	-	-
Oslo	-	-

City Infrastructure is to a large extent influenceable by public investment (and hence by policy makers). Connectivity on the other hand is a lot harder to influence through policies.

**Source:** [http://pages.eiu.com/rs/eiu2/images/EIU\\_BestCities.pdf](http://pages.eiu.com/rs/eiu2/images/EIU_BestCities.pdf)

**IT Industry Competitiveness, Economist Intelligence Unit (2011)** – Singapore leads the peer group comfortably in this country-based survey; it is ranked 7<sup>th</sup> among GFCI centres. Second in the peer group is Oslo much further down in the ranking in 32<sup>nd</sup> position, closely followed by the Japanese centres in 35<sup>th</sup> place and by Busan, Hong Kong and Seoul, which all share the 39<sup>th</sup> place. The Chinese centres are the peer group laggards in 58<sup>th</sup> position among GFCI centres. Rankings have been fairly stable over time; Chinese centres have lost 4

places between GFCI 12 and 13 due to the introduction of new centres whose performance in this instrumental factor is superior.

IT Industry Competitiveness	GFCI 14	GFCI 13	GFCI 12
Singapore	7	7	7
Oslo	32	32	32
Osaka	35	35	35
Tokyo	35	35	35
<b>Busan</b>	<b>39</b>	<b>39</b>	<b>39</b>
Hong Kong	39	39	39
Seoul	39	39	39
Beijing	58	57	54
Shanghai	58	57	54
Shenzhen	58	57	54

Set up in 2007 by the EIU for BSA Software Alliance, the IT Industry Competitiveness Index compares 66 countries on the extent to which they are capable of sustaining a strong IT sector. 26 indicators are used to create the index and these are split into roughly six areas:

- ◆ Overall business environment (10% weight) – relates to foreign investment policy, private property protection, government regulation and freedom to compete;
- ◆ IT infrastructure (20%) – market spending on IT products & services, PC ownership, broadband and mobile penetration and internet security;
- ◆ Human capital (20%) – enrolment in higher education and in science, IT sector employment and quality of technology skills;
- ◆ R&D development (25%) – public and private spending on R&D, domestic IT patent applications and receipts from royalty and license fees;
- ◆ Legal environment (10%) – protection and enforcement of IP rights, electronic signature status, data privacy, anti-spam and cybercrime laws;
- ◆ Support for IT industry development (15%) – e-government strategy, public procurement of IT, access to investment capital and absence of preferential government support for specific technologies or sectors.

The table below shows how the peer group economies rank in the various constituent parts of this EIU survey. Again, rankings take account of participants in EIU's survey as opposed to participants in the GFCI survey.

Country	Overall	Business Environment	IT Infrastructure	Human Capital	R&D	Legal Environment	IT Support
Singapore	3	10	17	13	5	15	4
Norway	14	18	6	20	20	11	5
Japan	16	23	13	14	6	20	29
Hong Kong	19	2	7	21	30	16	9

<b>Korea</b>	<b>19</b>	<b>26</b>	<b>19</b>	<b>4</b>	<b>12</b>	<b>21</b>	<b>28</b>
China	38	54	48	2	26	41	58

According to this survey, human capital is Korea's strongest feature followed by R&D. IT support and the business environment are the main areas of concern followed by the legal environment.

Most constituent parts of this index are dependent on public policies, legislation and spending. The index is therefore highly influenceable. Local authorities' influence on this factor is more limited but a focus on education, R&D and IT infrastructure are all policies that can yield results. **Source:** <http://globalindex11.bsa.org/country-table/>

**Political Risk Index, Exclusive Analysis Ltd. (2012)** – Singapore takes the first place in this country-based survey, followed immediately by Oslo in second. The reminder of the peer group is further down in the ranking with Korean and Japanese centres sharing the 30<sup>th</sup> place among GFCI centres and the Chinese centres lagging significantly in 70<sup>th</sup> position. Hong Kong is not ranked.

Political Risk	GFCI 14	GFCI 13	GFCI 12
Singapore	1	1	1
Oslo	2	2	2
<b>Busan</b>	<b>30</b>	<b>30</b>	<b>30</b>
Osaka	30	30	30
Seoul	30	30	30
Tokyo	30	30	30
Beijing	70	69	67
Shanghai	70	69	67
Shenzhen	70	69	67
Hong Kong	-	-	-

Exclusive Analysis Ltd is a private intelligence company that specializes in forecasting political and violent risks utilising the knowledge of more than 200 political risk experts worldwide. The Political Risk Index based on their rigorous analyses and forecasts assigns scores to individual countries according to a number of variables ranging from internal stability to external threats. The scores are therefore subjective as they are based on analysts' assessments; however the significant number of analysts involved as well as their geographically diverse locations ascertains that any negative or positive bias towards a country is eliminated.

This index is evidently very difficult to influence by government policies especially in the case of a developed country, where political risk should be low by definition and the right policies are presumably already in place.

**Source:** <http://www.exclusive-analysis.com/>

**Global Information Technology, World Economic Forum (2013)** – Singapore and Oslo are ranked high among GFCI centres, taking respectively 2<sup>nd</sup> and 5<sup>th</sup> places. Busan and Seoul come next in 18<sup>th</sup> place followed by Hong Kong in 26<sup>th</sup>. Osaka and Tokyo are further down the ranking at 34<sup>th</sup> position and Chinese centres are lagging the peer group significantly in 64<sup>th</sup> place.

Global Information Technology	GFCI 14
Singapore	2
Oslo	5
<b>Busan</b>	<b>18</b>
Seoul	18
Hong Kong	26
Osaka	34
Tokyo	34
Beijing	64
Shanghai	64
Shenzhen	64

The Global IT Report started as a special project of the World Economic Forum, in collaboration with INSEAD, and was previously known as the Network Readiness Index. It originates as a component of WEF's Global Competitiveness Report and explores the impact of information and communication technologies (ICT) on productivity and development. The survey ranks 142 countries according to how well they leverage ICT to boost their economic competitiveness and improve their social environment. To derive the IT Competitiveness score this study uses 10 composite measures (or pillars as WEF calls them), comprising a range of quantitative and qualitative data, and grouped into four sub-indices:

Environment – encompasses two pillars: political & regulatory environment and business & innovation environment:

1 <sup>st</sup> Pillar Environment	Political/Regulatory	Business/Innovation	Overall Environment	WEF Rank
Singapore	1	1	1	2
Hong Kong SAR	15	3	7	13
Norway	9	16	10	7
Japan	16	39	26	18
<b>Korea, Rep.</b>	<b>43</b>	<b>15</b>	<b>35</b>	<b>12</b>
China	46	105	64	51

Readiness – the next three pillars: infrastructure & content, affordability and skills:

2 <sup>nd</sup> Pillar Readiness	Infrastructure & Digital Content	Affordability	Skills	Overall Readiness	WEF Rank
Norway	4	20	34	6	7
Singapore	20	29	2	8	2
Hong Kong SAR	28	5	23	16	13
<b>Korea, Rep.</b>	<b>18</b>	<b>70</b>	<b>27</b>	<b>24</b>	<b>12</b>
Japan	22	78	22	27	18
China	87	42	57	66	51

Usage – encompasses three more pillars: individual, business and government usage:

3 <sup>rd</sup> Pillar Usage	Individual	Business	Government	Overall Usage	WEF Rank
<b>Korea, Rep.</b>	<b>2</b>	<b>12</b>	<b>1</b>	<b>2</b>	<b>12</b>
Singapore	10	14	2	5	2
Norway	3	9	13	6	7
Japan	13	3	21	8	18
Hong Kong SAR	12	20	15	16	13
China	82	37	33	51	51

Impact – the last two pillars: economic impacts and social impacts:

4 <sup>th</sup> Pillar Impact	Economic	Social	Overall Impact	WEF Rank
Hong Kong SAR	16	5	10	13
<b>Korea, Rep.</b>	<b>12</b>	<b>1</b>	<b>4</b>	<b>12</b>
China	79	30	41	51
Japan	10	26	17	18
Norway	11	17	13	7
Singapore	2	3	1	2

Korea seems to be doing very well in terms of usage and impact of information technology. Clearly the biggest relative weakness in Korea's economy IT competitiveness is affordability followed by Korea's political/regulatory environment and skills.

This instrumental factor is less dependent on public policies as a large chunk of its inputs come from individual and business usage, economic and social impacts and other measures that policy makers will find hard to affect. However Korea seems to score less well precisely in an area that is most subject to government policies – the political and regulatory environment.

**Source:** <http://www.weforum.org/issues/global-information-technology/index.html>

**Global Talent Index, Economist Intelligence Unit (2012)** – Oslo and Singapore lead the peer group in this country-based instrumental factor, ranked respectively 8<sup>th</sup> and 9<sup>th</sup> among GFCI centres; Hong Kong follows closely in 13<sup>th</sup> position. Next come Busan and Seoul in 37<sup>th</sup> position with the Japanese centres further down the ranking at 44<sup>th</sup> place. Chinese centres are last in the peer group and 50<sup>th</sup> among GFCI centres.

Global Talent Index	GFCI 14	GFCI 13
Oslo	8	8
Singapore	9	9
Hong Kong	13	13
<b>Busan</b>	<b>37</b>	<b>37</b>
Seoul	37	37
Osaka	44	43
Tokyo	44	43
Beijing	50	49
Shanghai	50	49
Shenzhen	50	49

The Global Talent Index Report: The Outlook to 2015 presents an outlook to 2015 for countries' talent development, attraction and retention potential. It gauges talent trends around the world on two dimensions: at the international level through a benchmarking index of talent environments in 60 countries; and at the enterprise level, determining how executives view the outlook for their own firms' ability to attract and retain the people they will need. The index is in essence a collection of data indicators that have been grouped into seven categories:

- ◆ Demographics – size and growth of working age population (20-59 years for the purposes of this survey);
  - ◆ Compulsory education – duration, enrolment and pupil-to-teacher ratios for primary and secondary education, adult literacy rate and education spending as a share of GDP;
  - ◆ University education – enrolment, total expenditure as a share of GDP and number of universities ranked in the World's Top 500;
  - ◆ Quality of the labour force – language and technical skills, researches and technicians in R&D, local managers and EIU's workforce quality rating;
  - ◆ Talent environment – protection of intellectual and private property, R&D as a share of GDP, restrictiveness of labour laws, wage regulation and meritocratic remuneration;
  - ◆ Openness – FDI as a share of GDP, openness to trade and ease of hiring foreign nationals;
  - ◆ Proclivity to attracting talent – employment growth and personal disposable income.
- ◆ According to EIU's findings, Korea's strengths are in compulsory education, talent environment and quality of the labour force. The main weaknesses lie in its demographics along with its openness, which is in large part affected by government policies. Proclivity to attract talent can also be considered an area of concern.

Many of the inputs that form this index are formed by government policies, regulations and expenditures. The index can be influenced especially over the long run. Local authorities can best influence this index by focusing on university education, (this measure stands in the middle but below Korea's overall score) along with R&D.

**Source:** <http://www.managementthinking.eiu.com/global-talent-index-2011-2015.html>

**Capital Access Index, Milken Institute (2010)** – Hong Kong is the peer group leader and is ranked 5<sup>th</sup> among GFCI centres with Singapore a distant second in 16<sup>th</sup> place. Next come Busan and Seoul, ranked 30<sup>th</sup> followed closely by Oslo 3 places behind. The Japanese centres are further down the ranking at 44<sup>th</sup> and the Chinese centres lag the rest in 53<sup>rd</sup>.

Capital Access Index	GFCI 14	GFCI 13	GFCI 12
Hong Kong	5	5	5
Singapore	16	16	16
<b>Busan</b>	<b>30</b>	<b>30</b>	<b>30</b>
Seoul	30	30	30
Oslo	33	32	32
Osaka	44	43	43
Tokyo	44	43	43
Beijing	53	52	51
Shanghai	53	52	51
Shenzhen	53	52	51

The Capital Access Index is a comprehensive analysis of the breadth, depth and vitality of capital markets across 122 countries that account for 82% of the world's land area, 94% of its population and 99% of world GDP. It ranks countries according to their support to economic activity and allows them to see how they compare to others in terms of creating the conditions necessary for businesses to raise capital.

There are 58 variables assessed for each country, grouped into seven components (sub indices) that include:

- ◆ Macroeconomic environment is based on variables like inflation, interest rates and taxes as well as financial sophistication relative to international norms;
- ◆ Institutional environment – enforceability of property rights, impartiality of the judicial system, levels of corruption and the efficiency of bankruptcy procedures;
- ◆ Financial and banking institutions – based on variables like soundness of financial institutions, extension of credit to the private sector, ease of access to bank loans and banking system efficiency;
- ◆ Equity market development – measure by stock market capitalisation relative to GDP, stock market liquidity and changes in the number of listings;
- ◆ Bond market development – measured by value of all bonds (private and public) relative to GDP and securitized asset issuance relative to GDP;

- ◆ Alternative sources of capital – this is a measure of the usage of diverse financial sources such as venture capital, credit cards and non-public stock offerings;
- ◆ International funding – measures the availability of foreign capital through exchange rates, international reserve holdings, foreign direct investment, capital inflows & outflows, and sovereign ratings.

Scores range from 0 to 10 with 10 being the highest and 0 the lowest.

According to this survey Korea's main strengths can be found in equity market development and alternative sources of capital while its main index is in international capital. Bond market development along with financial and banking institutions can also be considered areas of concern.

Some of the sub-indices in the Capital Access Index can be influenced with the right macroeconomic policies and institutional framework. International funding, alternative capital, equity and bond markets' development are less prone to government policies, especially in a free market economy.

**Source:** [www.milkeninstitute.org/research](http://www.milkeninstitute.org/research)

**Top Tourism Destinations, Euro Monitor Archive (2012)** – Hong Kong takes the first place in this instrumental factor followed immediately by Singapore in 2<sup>nd</sup>. Shenzhen is close behind in 6<sup>th</sup> place, which is a staggering leap from the 40<sup>th</sup> place it took in GFCI 12 (it was 74<sup>th</sup> in Euro Monitor archive in 2012<sup>7</sup> but leapt to 8<sup>th</sup> in 2013<sup>8</sup>. Shanghai comes next in 11<sup>th</sup> place, followed by Beijing in 14<sup>th</sup>. Seoul is 26<sup>th</sup> and Tokyo 28<sup>th</sup>. Busan, Osaka and Oslo are not ranked in this instrumental factor.

Top Tourism Destinations	GFCI 14	GFCI 13	GFCI 12
Hong Kong	1	1	1
Singapore	2	2	2
Shenzhen	6	6	40
Shanghai	11	11	10
Beijing	14	14	11
Seoul	26	26	22
Tokyo	28	28	13
<b>Busan</b>	-	-	-
Osaka	-	-	-
Oslo	-	-	-

The World's Top 150 Tourism Destinations is a ranking of cities by the number of international arrivals over a year. It is estimated that around 80% of these arrivals are tourists but there is also an ever more important part – the MICE (Meetings, Incentives, Conventions

<sup>7</sup> <http://blog.euromonitor.com/2012/01/euromonitor-internationals-top-city-destinations-ranking1-.html>

<sup>8</sup> <http://blog.euromonitor.com/2013/01/top-100-cities-destination-ranking.html> Shenzhen ranks 6<sup>th</sup> among GFCI centres because Euro Monitor rates Macau 5<sup>th</sup> and Antalya 7<sup>th</sup>, neither of which participates in the GFCI.



and Exhibitions) travellers. International top tourist destinations have a powerful incentive to invest in travel infrastructure, hotels and convention centres and thus improve the overall quality of living and working there.

This instrumental factor is very difficult to influence through either public or private sector policies.

**Source:** <http://blog.euromonitor.com/2013/01/top-100-cities-destination-ranking.html>

**Liner Shipping Connectivity Index, World Bank (2011)** – In this country-based instrumental factor, Chinese centres take the first place and thus lead the peer group. Close behind are Hong Kong at 5<sup>th</sup>, Singapore at 6<sup>th</sup> and Busan and Seoul at 7<sup>th</sup> place. Japanese centres are much further down the rank in 26<sup>th</sup> place and Oslo is the undisputed peer group laggard at 69<sup>th</sup> place. It should be noted that both the Korean and the Japanese centres have made progress since GFCI 13.

Liner Shipping Connectivity Index	GFCI 14	GFCI 13	GFCI 12
Beijing	1	1	1
Shanghai	1	1	1
Shenzhen	1	1	1
Hong Kong	5	5	4
Singapore	6	6	5
<b>Busan</b>	<b>7</b>	<b>10</b>	<b>9</b>
Seoul	7	10	9
Osaka	26	25	30
Tokyo	26	25	30
Oslo	69	64	67

Created in 2004, the Liner shipping connectivity index measures the connectivity a country has to global shipping networks. It is computed by the United Nations Conference on Trade and Development (UNCTAD) and based on five components of the maritime transport sector. These include: number of ships, their container-carrying capacity, maximum vessel size, number of services, and number of companies that deploy container ships in a country's ports. The data comes from the International Containerization Online.

Policy makers would have limited indirect influence on this instrumental factor through relaxing regulations on their ports and privatization. That said, there is very little policy makers can do regarding their geographical circumstances, such as access to waterways, trade routes and availability of natural deep sea warm water harbours.

**Source:** <http://data.worldbank.org/indicator/IS.SHP.GCNW.XQ>

**Global Enabling Trade Report, World Economic Forum (2012)** – Singapore and Hong Kong are the undisputed leaders in this instrumental factor, taking 1<sup>st</sup> and 2<sup>nd</sup> places

respectively. Further behind are Oslo in 18<sup>th</sup> and the Japanese centres in 23<sup>rd</sup> place. Busan and Seoul are significantly behind ranked 46<sup>th</sup>, while the Chinese centres are last in the peer group in 57<sup>th</sup>.

Global Enabling Trade Report	GFCI 14
Singapore	1
Hong Kong	2
Oslo	18
Osaka	23
Tokyo	23
<b>Busan</b>	<b>46</b>
Seoul	46
Beijing	57
Shanghai	57
Shenzhen	57

The Global Enabling Trade Index (ETI) was developed within the context of the World Economic Forum's Supply Chain and Transportation Industry Partnership program and was first published in The Global Enabling Trade Report 2008. It ranks 132 individual economies and measures the extent to which they have developed the institutions, policies, and services that facilitate free flow of goods over borders and to destination. The structure of this index reflects the main enablers of trade, breaking them into four subindexes and nine composite measures (pillars). The pillars combine a range of individual variables including both hard data and survey data from the World Economic Forum's Executive Opinion Survey<sup>9</sup>:

- ◆ The market access subindex measures the extent to which the policy framework of a country welcomes foreign goods and enables access to foreign markets for its exporters. It includes one pillar: Domestic and foreign market access;
- ◆ The border administration subindex gauges the extent to which the administration at the border facilitates the entry and exit of goods. It encompasses 3 pillars: Efficiency of customs administration; Efficiency of import-export procedures; and Transparency of border administration;
- ◆ The transport and communications infrastructure subindex assesses the country's transport and communications infrastructure that facilitates the movement of goods within the country and across the border. It includes 3 pillars: Availability and quality of transport infrastructure; Availability and quality of transport services; and Availability and use of ICTs;
- ◆ The business environment subindex looks at the quality of governance and the overarching regulatory and security environment impacting the business of importers and exporters. It includes the final 2 pillars: regulatory environment and physical security.

<sup>9</sup> <https://wefsurvey.org/index.php?sid=28226&lang=en&intro=0>

According to WEF's survey market access is by far the biggest weakness in Korea's enabling trade framework (Korea rank 115<sup>th</sup> of 132 surveyed countries), indicating economic openness as a major drag on the country's competitiveness. The business environment is also an area of concern with both regulatory environment and physical security score relatively low. Korea's main strength is in transport and communications infrastructure, particularly in availability and use of ICT. Efficiency of import and export procedures is also highlighted as one of the main strengths, which however is offset by transparency of border administration.

This index is mostly dependent on the overall regulatory environment, administrative efficiency and the country's infrastructure. It is therefore highly influenceable by public policies.

**Source:** <http://www.weforum.org/issues/international-trade>

**Business Environment, the Economist Intelligence Unit (2012-16)** – Singapore is at the top of this country-based instrumental factor, closely followed by Hong Kong (ranked 4<sup>th</sup> among GFCI centres). Oslo is further down the ranking in 19<sup>th</sup> position. Korean and Japanese centres are further behind in 36<sup>th</sup> and 38<sup>th</sup> places respectively. Chinese centres lag the peer group and take 56<sup>th</sup> place.

Business Environment	GFCI 14	GFCI 13	GFCI 12
Singapore	1	1	1
Hong Kong	4	4	5
Oslo	19	19	18
<b>Busan</b>	<b>36</b>	<b>36</b>	<b>41</b>
Seoul	36	36	41
Osaka	38	37	39
Tokyo	38	37	39
Beijing	56	55	55
Shanghai	56	55	55
Shenzhen	56	55	55

The business environment ranking covers 82 of the world's more significant economies and measures their attractiveness to business. It is based on business surveys, quantitative data and expert assessments and reflects the general criteria used by businesses for the development of their strategic and investment location decisions.

The scores (from 1 to 10) are based on 91 indicators, the data for which is gathered by a large team of EIU economists and country experts, and through EIU's global network of analysts. The EIU provides both a business environment score per country based on the last five years and one based on a five year forecast; in other words the scores are based not only on present and historical conditions but also on expectations about those conditions prevailing over the short to medium term.

There are broad categories used to compile the final Business Environment score:

- ◆ Political environment
- ◆ Macroeconomic environment
- ◆ Market opportunities (mostly related to purchasing power, trade, geographic proximity, natural resources and investment efficiency)
- ◆ Policies towards free enterprise and competition
- ◆ Foreign trade and exchange controls
- ◆ Taxes
- ◆ Financing
- ◆ Labour market (including labour costs, skills, flexibility and labour laws), and
- ◆ Infrastructure

The number of indicators for each category is different and about half of them are based on objective quantitative data. Qualitative assessments are drawn from a number of data sources and business surveys for the past five years and are based on EIU assessment for the next five years (the forecasted period).

The EIU offers in-depth country assessments but these are not publicly available.

Given the complexity of the index, the Business Environment ranking will be difficult to influence through government policies. Yet there are a number of areas directly related to laws and regulations as well as taxes directly controlled by the government. It would be a lot harder for local authorities or for the private sector to influence this index.

**Source:** <http://www.economistshop.com/asp/bookdetail.asp?book=3175>

**Operational Risk Rating, the Economist Intelligence Unit (2013)** – Singapore leads the peer group in 3<sup>rd</sup> place among GFCI centres, followed immediately by Oslo in 4<sup>th</sup> and Hong Kong in 5<sup>th</sup> place. Japanese centres are further down the ranking in 30<sup>th</sup> place and Korean ones are still further behind in 56<sup>th</sup>. Chinese centres lag the rest of the peer group in 71<sup>st</sup> place.

Operational Risk Rating	GFCI 14	GFCI 13	GFCI 12
Singapore	3	3	3
Oslo	4	4	4
Hong Kong	5	6	6
Osaka	30	41	30
Tokyo	30	41	30
<b>Busan</b>	<b>56</b>	<b>61</b>	<b>58</b>
Seoul	56	61	58
Beijing	71	70	68
Shanghai	71	70	68
Shenzhen	71	70	68

The Economist Intelligence Unit has developed an indicator of operational risk that monitors 180 countries and is updated every quarter and also if certain events require it. Its aim is to

measure the risk to business profitability and it is comprised of ten different categories of risk with different weightings that reflect their importance from a business point of view. The underlying risk categories are: macroeconomic, foreign trade and payments, financial, tax policy, legal and regulatory, security, political stability, government effectiveness, labour market, and infrastructure risks.

The EIU lists infrastructure, macroeconomic and tax policy as the lowest risks. The highest risks are in government effectiveness, political stability and labour markets. Many of the input measurements of this ranking are directly affected by public policies and the index can therefore be influenced.

**Source:** [www.viewswire.com](http://www.viewswire.com)

**Quality of Roads, the World Economic Forum (2013)** – Hong Kong and Singapore share 2<sup>nd</sup> place and are leaders in the peer group. Busan and Seoul come next in 18<sup>th</sup> place while the Japanese centres are further behind in 31<sup>st</sup>. Chinese centres come next in 52<sup>nd</sup> place and Oslo is last, ranked 65<sup>th</sup>. It is worth noting that while most of the peer group centres' positions have been relatively stable over time, Korea's have been declining.

Quality of Roads	GFCI 14	GFCI 13	GFCI 12
Hong Kong	2	3	3
Singapore	2	1	1
<b>Busan</b>	<b>18</b>	<b>16</b>	<b>15</b>
Seoul	18	16	15
Osaka	31	30	29
Tokyo	31	30	29
Beijing	52	51	50
Shanghai	52	51	50
Shenzhen	52	51	50
Oslo	65	64	61

Quality of Roads is an indicator used to compile a sub index that reflects a country's ground infrastructure; this sub index is then used to compile WEF's Travel and Tourism Competitiveness Index. Quality of roads refers to the country road network that is used by drivers. The measure is based on WEF's annual Executive Opinion Survey conducted through a questionnaire among business executives around the world, and is hence more indicative of perception of the road network rather than hard data: business executives were asked to classify the quality of the road network in their country of residence on a scale from 1 to 7 with 1 meaning underdeveloped and 7 meaning extensive and efficient by international standards.

Road infrastructure is an area greatly dependent on and heavily influenced by government policies in terms of prioritising, planning, budgeting, building, quality control and

maintenance. The index is therefore influenceable by policy makers but it should be remembered that it is based on public perceptions rather than hard data.

**Source:** <http://www.weforum.org/en/initiatives/gcp/TravelandTourismReport>

**Office Space around the World, Cushman & Wakefield (2012)** – Busan and Osaka are not rated in this survey. Seoul is the undisputed leader in the peer group, taking the 18<sup>th</sup> place. Its performance has declined over the past 3 editions due to a mixture of raising office rents and the introduction of several lower cost centres to the GFCI. Shenzhen is a distant second in 38<sup>th</sup> place and the remainder of the peer group centres are much further down the ranks and below the 50<sup>th</sup> place.

Office Space Around the World	GFCI 14	GFCI 13	GFCI 12
Seoul	18	11	9
Shenzhen	38	33	31
Singapore	53	59	56
Oslo	54	47	44
Shanghai	57	60	57
Beijing	60	63	60
Tokyo	65	65	62
Hong Kong	66	66	63
<b>Busan</b>	-	-	-
Osaka	-	-	-

This report compares office occupancy costs across the globe over the past twelve months, ranking the most expensive locations in which to occupy office space. This is a simple measure of average annual rental rates in various cities' business districts that is provided by Cushman & Wakefield in euro, US dollars and local currency per square meter. The Global Financial Centres Index uses the euro measure (Office Occupancy Costs, which is reviewed below is another similar measure provided in US dollars; using both measures is meant to mitigate differences that would occur due to exchange rate fluctuations).

Costs of office space are an important consideration for the running of any business (not only financial services). Higher costs will not be beneficial but these are rarely viewed in isolation – what businesses receive in return for running an office is more important and this is what determines the demand for office space and consequently the costs.

This is an index that is determined by market forces and is very difficult to influence through government policies. Local tax and/or public services arrangements at the local level however can be considered to subtract from the rent costs. Cutting red tape and improving planning permissions can also increase supply and thus reduce rents.

**Source:** [www.cushwake.com/cwglobal](http://www.cushwake.com/cwglobal)

**Global Innovation Index, INSEAD (2012)** – Singapore leads the peer group and is ranked 4<sup>th</sup> among GFCI centres followed by Hong Kong in 14<sup>th</sup> position. Next come Oslo in 27<sup>th</sup> place followed by Busan and Seoul at 35<sup>th</sup>. Further down the ranking are Osaka and Tokyo, ranked 41<sup>st</sup> among GFCI centres and the three Chinese centres, which are ranked 50<sup>th</sup>.

Global Innovation Index	GFCI 14	GFCI 13	GFCI 12
Singapore	4	4	4
Hong Kong	14	14	14
Oslo	27	27	27
<b>Busan</b>	<b>35</b>	<b>35</b>	<b>35</b>
Seoul	35	35	35
Osaka	41	40	40
Tokyo	41	40	40
Beijing	50	49	48
Shanghai	50	49	48
Shenzhen	50	49	48

The Global Innovation Index gauges the innovation friendliness of 142 economies, which account for 95% of the world's population and 99% of the world's Gross Domestic Product. It is constructed of two sub-indices, the Innovation Input Sub-Index and the Innovation Output Sub-Index, each built around composite measures (or pillars). Data is gathered from more than 30 sources, covering a large spectrum of innovation drivers and results, and privileging hard data over qualitative assessments.

The Innovation Input combines elements of the national economy that enable innovative activities. It is constructed of five input pillars capture:

- ◆ Institutions – political, regulatory and business environment;
- ◆ Human capital and research – education and R&D;
- ◆ Infrastructure – general infrastructure, ICT and ecological sustainability;
- ◆ Market sophistication – availability of competition, trade, investment and credit;
- ◆ Business sophistication – innovation workers, knowledge absorption and innovation linkages (which measures the productive interaction between domestic and foreign inventors, universities and businesses, business clusters, etc.)

The Innovation Output assesses the results of actual innovation. It consists of two pillars:

- ◆ Scientific outputs – knowledge creation, impact and diffusion;
- ◆ Creative outputs – creative goods & services, online creativity and intangible assets.

The study identifies Korea's main strengths in infrastructure, business sophistication and knowledge and technology outputs. The main weaknesses of Korea can be found in trade and competition along with innovation linkages; political and regulatory environment are also areas of concern. General education is also lagging but this is offset by tertiary education and R&D.



This index can be influenced by public policy through improvements in the institutional framework and investment in infrastructure, education and R&D. The private sector can be just as significant in adopting practices that encourage knowledge absorption and innovation linkages as well as investing in R&D. Local authorities can also contribute through dedicated policies promoting education, R&D and local science & technology infrastructure but seeing that this is a country-based index, local policies are likely to have limited influence.

**Source:** <http://www.globalinnovationindex.org/gii/>

**Number of International Fairs & Exhibitions**, World Economic Forum (2013) – Chinese centres lead the peer group in this country-based instrumental factor and are ranked 16<sup>th</sup> among GFCI centres. Osaka and Tokyo come next in 22<sup>nd</sup> place followed by Busan and Seoul in 36<sup>th</sup>. Oslo is next in 45<sup>th</sup> place, followed immediately by Singapore in 46<sup>th</sup> and Hong Kong is last in 58<sup>th</sup>. Rankings have been relatively stable over the past three editions of the GFCI with the exception of Hong Kong, which has steadily declined. It should be noted that this is a country-based survey, not standardised by countries' population or economic size; it merely measures the number of international fairs and exhibitions that took place in a given country over a two-year period. As such it can be expected that large countries will naturally have higher score.

Number of International Fairs and Exhibitions	GFCI 14	GFCI 13	GFCI 12
Beijing	16	18	18
Shanghai	16	18	18
Shenzhen	16	18	18
Osaka	22	16	16
Tokyo	22	16	16
<b>Busan</b>	<b>36</b>	<b>36</b>	<b>35</b>
Seoul	36	36	35
Oslo	45	46	45
Singapore	46	42	41
Hong Kong	58	57	54

This measure is derived from the World Economic Forum's Travel and Tourism Competitiveness Index. The Number of International Fairs and Exhibitions is one of the measures used to compile a sub index called Cultural Resources (the 14<sup>th</sup> pillar in the survey). It measures the fairs and exhibitions that were held within a country annually by taking the average for the period 2007-2009 (so it is not always a whole number).

Although not directly and obviously related to a city's attractiveness as a financial centre, it is an important measure of a country's overall attractiveness and flow of mainly business travellers. Countries hosts of more fairs and exhibitions will be more attractive for various business ventures and hence for finance.



Also the higher number of such international events will tend to have a spill over effect to the overall attractiveness and international image of a city. International events would also justify investment in a city's development because they require adequate infrastructure, which would have a beneficial effect on every aspect of a city's life.

This index can be influenced directly through government policies such as sponsorship of landmark fairs and exhibitions, tax incentives and international marketing activities. Local authorities can be particularly active with regard to influencing this instrumental factor.

**Source:** <http://www.weforum.org/en/initiatives/gcp/TravelandTourismReport>

We now include several instrumental factors that have a lower correlation to the GFCI 14 but would be of interest as they provide city-based measures to Busan. These are briefly reviewed below:

**City GDP Figures, The Brookings Institution** – Tokyo is the peer group leader and takes the first place in this instrumental factor, followed closely by Seoul, which ranks 3<sup>rd</sup> among GFCI centres. Next come Osaka in 6<sup>th</sup> place, followed by Shanghai in 9<sup>th</sup>, Beijing at 11<sup>th</sup>, Hong Kong at 14<sup>th</sup> and Singapore at 16<sup>th</sup>. Busan is 25<sup>th</sup> a little behind Shenzhen, which is 21<sup>st</sup> and far ahead of Oslo, which is the laggard of the peer group taking the 60<sup>th</sup> place. It should be noted that unlike Seoul, Busan has lost three places between GFCI 12 and GFCI 13. This is mostly due to the rapid rise in GDP of the Chinese centres, two of which overtook Busan but all of which are still behind Seoul.

City GDP Figures	GFCI 14	GFCI 13	GFCI 12
Tokyo	1	1	1
Seoul	3	3	6
Osaka	6	6	5
Shanghai	9	9	19
Beijing	11	11	27
Hong Kong	14	14	15
Singapore	16	16	23
Shenzhen	21	21	35
<b>Busan</b>	<b>25</b>	<b>25</b>	<b>22</b>
Oslo	60	59	44

This is a ranking of cities and their metropolitan areas by GDP. The list is largely based on projections and approximations as it is difficult to be exact when identifying GDP values. Depending on the methodology used, the rankings and values can vary and it is worth noting that some cities include larger urban areas which may result in lower per capita GDP estimates, whereas cities with a large portion of the working population living in metro areas, may have higher per capita GDP estimates as a result.

According to the Brookings Institution, the Busan-Ulsan metro area comprises a pocket of growth within South Korea, which outperforms the country in both employment and GDP per capita.

If we consider sustainable GDP growth to be the pinnacle of modern policy then this should be the ultimate policy goal for both government and local officials. There is however a fine balance to consider between growth and quality of life. The rapid growth experienced by Chinese cities in recent years has not been necessarily a good thing.

Source: <http://www.brookings.edu/research/interactives/global-metro-monitor-3>

**City GDP Composition (Business/Finance), The Brookings Institution** – Business and finance as a share of GDP puts Oslo at the top of instrumental factor and 16<sup>th</sup> among GFCI centres; Tokyo is a distant second in 32<sup>nd</sup> place. Next come Hong Kong in 42<sup>nd</sup>, followed by Seoul (48<sup>th</sup>), Singapore (51<sup>st</sup>) and Osaka (55<sup>th</sup>). Busan is further down the ranks along with the Chinese centres with Beijing taking the 61<sup>st</sup>, Shanghai the 63<sup>rd</sup> and Busan sharing the 64<sup>th</sup> place with Shenzhen.

City GDP composition (Business/Finance)	GFCI 14
Oslo	16
Tokyo	32
Hong Kong	42
Seoul	48
Singapore	51
Osaka	55
Beijing	61
Shanghai	63
<b>Busan</b>	<b>64</b>
Shenzhen	64

This measure comes from the same Brookings Institution survey as already reviewed. Below is the breakdown of Busan-Ulsan's metro area industry sectors:

Share of GDP Sector	Busan	Shenzhen	Shanghai	Beijing	Seoul	Tokyo	Singapore	Hong Kong
Commodities	5.1%	0.3%	0.6%	1.6%	4.5%	0.3%	0%	0.1%
Construction	4.9%	2.9%	3.3%	4.1%	5.5%	5.2%	4.5%	4.1%
Business/Finance	12.4%	14.3%	16.8%	19.5%	27.4%	31.7%	26.3%	29.3%
Manufacturing	45.7%	42.4%	36.0%	17.2%	20.5%	14.6%	23.6%	1.8%
Local/Non-Market	15.5%	19.3%	19.2%	35.3%	16.6%	15.3%	11.5%	18.5%
Trade & Tourism	9.0%	15.0%	18.2%	15.9%	14.3%	17.8%	19.9%	31.5%
Transportation	5.5%	4.3%	4.3%	5.0%	9.9%	13.3%	12.7%	12.6%
Utilities	2.0%	1.5%	1.4%	1.3%	1.3%	1.8%	1.5%	2.2%

It seems that Busan-Ulsan's economy is highly concentrated in manufacturing with a distribution very similar to Shenzhen and (to a lesser extent) Shanghai; but very much unlike

the economies of Tokyo, Hong Kong, Seoul and Singapore (all of whom make it into the Top 10 of the GFCI).

Busan needs to boost its economy's share of business and finance services. It already has a substantial manufacturing base and the logical next step would be to move up the value chain. Creating a welcoming business environment and raising awareness on an international level will be essential for pursuing this goal.

**Source:** <http://www.brookings.edu/research/interactives/global-metro-monitor-3>

**City to country GDP Ratio, the Brookings Institution and the World Bank** – Hong Kong and Singapore are in top of this instrumental factor with Seoul close behind in 6<sup>th</sup> place. Other centres are further down the ranks with Tokyo next in 28<sup>th</sup> place, followed immediately by Busan in 30<sup>th</sup>. Oslo is next in 38<sup>th</sup> place followed by Osaka in 45<sup>th</sup>, Shanghai in 50<sup>th</sup>, Beijing in 54<sup>th</sup> and Shenzhen in 60<sup>th</sup> place.

City to Country GDP Ratio	GFCI 14	GFCI 13
Hong Kong	1	1
Singapore	2	2
Seoul	6	6
Tokyo	28	28
<b>Busan</b>	<b>30</b>	<b>30</b>
Oslo	38	37
Osaka	45	44
Shanghai	50	49
Beijing	54	53
Shenzhen	60	59

This ratio is derived from Brookings Institution's estimates of urban agglomerations output at real \$GDP divided by the World Bank's real \$GDP (constant 2000 US\$) per country. It is an important measure of a cities overall contribution and importance for the nation's economy.

**Source:** <http://www.brookings.edu/research/interactives/global-metro-monitor-3>  
[http://databank.worldbank.org/ddp/home.do?Step=2&id=4&hActiveDimensionId=WDI\\_Series](http://databank.worldbank.org/ddp/home.do?Step=2&id=4&hActiveDimensionId=WDI_Series)

## 4.4. Instrumental Factors Influenceability

To further assist the analysis we have prepared a table that shows the levels of influenceability of all reviewed instrumental factors as well as the authorities that can potentially influence them:

Instrumental Factor	Busan's Performance	National	Local	Private Sector
Global City Competitiveness	Low	Mid-High	Mid-Low	Low
Banking Industry Country Risk Assessments	Medium	Mid	Low	Mid-High
Global Power City Index	-	Mid	Mid-High	Low

Instrumental Factor	Busan's Performance	National	Local	Private Sector
Office Occupancy Costs	-	Low	Mid	Low
World Competitiveness Scoreboard	Low	Mid	Low	Mid
Global Competitiveness Index	Medium	Mid	Low	Mid
Volume of Stock Futures Trading	High	Low	Low	Low
City Global Image	-	High	High	Mid
Commodity Futures Notional Turnover	Medium	Low	Low	Low
Global Cities Index	-	Low	Low	Low
Price Levels	-	Mid	Mid-Low	Low
Innovation Cities Global Index	Low	Low	Low	Low
Financial Secrecy Index	High	High	Low	Low
Citizens Domestic Purchasing Power	-	Mid	Mid-Low	Low
Connectivity	-	Low	Low	Low
IT Industry Competitiveness	Medium	High	Mid-Low	Mid-Low
Institutional Effectiveness	High	High	Mid	Low
Number of Greenfield Investments	-	Low	Mid	Mid-High
Political Risk	Medium	Mid	Low	Low
Physical Capital	Medium	High	High	Mid-Low
Global Information Technology	High	Mid-Low	Low	Low
Wage Comparison Index	-	High	Low	Mid
Global Talent Index	Medium	Mid-High	Low	Mid-Low
Capital Access Index	Medium	Mid	Low	Low
Top Tourism Destinations	-	Low	Low	Low
Liner Shipping Connectivity Index	High	Low	Low	Low
Global Enabling Trade Report	Low	High	Low	Low
Business Environment	Medium	High	Low	Low
Infrastructure	-	Mid-High	High	Mid
Volume of Stock Options Trading	-	Low	Low	Low
Capitalisation of Stock Exchanges	Medium	Low	Low	Low
Operational Risk Rating	Low	High	Low	Low
Commodity Options Notional Turnover	-	Low	Low	Low
Quality of Roads	High	Mid-High	Mid	Low
City Global Appeal	Low	Mid	High	High
Office Space Around the World	-	Low	Mid	Low
Global Innovation Index	Medium	Mid-High	Mid-Low	Mid
Human Capital	Low	Mid	Mid-High	Mid
Value of Share Trading	High	Low	Low	Low
Number of International Fairs and Exhibitions	Medium	High	High	High
City GDP Figures	Medium	Low	Mid-Low	Mid-Low
Volume of Share trading	High	Low	Low	Low
City GDP composition (Business/Finance)	Low	Low	Mid-Low	Mid-Low
Value of Bond Trading	High	Low	Low	Low
City to Country GDP Ratio	High	Mid-Low	Low	Low
Broad Stock Index Levels	High	Low	Low	Low

## 5. STRATEGIC PRIORITIES

### 5.1. Busan's Strengths and Weaknesses

The objective instrumental factors used in the Global Financial Centres Index are all designed and researched by a host of diverse reputable organisations and are for the most part updated on regular basis. Looking at them in a bit more detail one can draw conclusions regarding Busan's and Korea's main strengths and weaknesses as viewed by these organisations. There are also some areas where the different studies seem to be giving conclusions that are contradictory.

Below is a summary table of these conclusions:

Strengths	Weaknesses	Contradictory
Technology adoption	International Awareness	Education / Human Capital
Infrastructure	GDP Composition	Innovation Environment
Low Cost Alternative	Economic Openness & FDI	GDP Size and Potential
Macroeconomic Environment	Labour Market	Appeal
Robust stock exchange and other institutions	Political & Regulatory Environment	Institutional Framework

### Strengths

- ◆ Technology adoption and usage – a number of measures indicate that Korea in general and Busan in particular possess sufficient technological readiness and that usage by society, business and government is at a high level. This is an important strength in that technology and especially ICT improves productivity and economic efficiency and is especially important for the financial services industry in an increasingly globalised world. Amongst the various measures where Busan's performance is strong are: technological readiness of WEF's Global Competitiveness Index, IT infrastructure of EIU's IT Competitiveness, Usage and Impact of WEF's Global IT, use of ICT of WEF's Enabling Trade, knowledge and technology outputs of INSEAD's Innovation index;
- ◆ Infrastructure – most of the reviewed measures indicate that Busan has a world class infrastructure. Like technology, infrastructures serves to boost economic efficiency as well as quality of life in a city and is an important pre-requisite of a modern, developed and vibrant financial centre. Sub-indices by WEF, INSEAD, Quality of Roads and Liner Shipping Connectivity all point to a robust physical and communication infrastructure. It should be noted however that Busan's performance in EIU's Physical Capital sub-index indicates that there is ample room for

improvement. Furthermore, Busan has low pollution and favourable weather conditions;

- ◆ Low cost alternative – Seoul performs well in terms of costs as compared to the rest of the peer group and Busan is a lower cost destination<sup>10</sup>. Rents and local services costs are an important component of the overall cost structure of any business and the lower they are the more attractive a destination can be considered. The combination of a broad and deep stock market proximity, world class infrastructure, widespread ICT usage and low rents can be an attractive mix for the financial services sector. It is important to note that data for Busan is not easy to find in the office cost indices that we use but we understand that office costs are approximately 40% lower than in Seoul. The new financial centre building (shortly due for completion) will enhance Busan's standing in terms of office space for the financial services industry;
- ◆ Macro-economy – a stable macroeconomic environment is an important trait for a country's competitiveness and one that is increasingly scrutinised by the wider investment community. This is rarely viewed from a city perspective but a city operates within a country-wide macroeconomic framework. Recent developments have proved that an unstable macro-economic environment can be disastrous for developed as well as emerging countries and have exposed some deep macro-economic problems across the developed world. Korea has the rare advantage of being a developed country with a stable macro-economy. The S&P, WEF and EIU's operational risk rating all point to a stable macro-economic environment with low risks;
- ◆ Stock exchange – Busan is the home of Korea Exchange, a robust and diversified exchange with a global status. There is little doubt that a world-class stock exchange to engender a broad and deep capital market is a fundamental condition for a world-class financial centre. Busan scores well in all measures from the World Federation of Stock Exchanges. Overall capitalisation of Korea Exchange is not as high in comparison to the rest of the peer group, which indicates that there is a scope for improvement.
- ◆ It should also be noted that several other Korean institutions are likely to move to Busan in the foreseeable future: The Korean Securities Depository, The Korean Asset Management Corporation and the Korean Housing Finance Corporation. There are many examples of countries with more than one financial centre:
  - London and Edinburgh in UK;
  - Zurich and Geneva in Switzerland;
  - Tokyo and Osaka in Japan;
  - Sao Paulo and Rio de Janeiro in Brazil;
  - Frankfurt and Munich in Germany;
  - New York and five others in USA;
  - Toronto and three others in Canada;

<sup>10</sup> [http://www.numbeo.com/property-investment/compare\\_cities.jsp?country1=South+Korea&country2=South+Korea&city1=Busan&city2=Seoul](http://www.numbeo.com/property-investment/compare_cities.jsp?country1=South+Korea&country2=South+Korea&city1=Busan&city2=Seoul)

- Shanghai and four others in China.

Being a ‘second’ financial centre in a country should not be considered a weakness. Many second cities thrive as financial centres, typically by specialising in one sector (such as wealth management, insurance, or maritime finance).

## Weaknesses

- ◆ International awareness – the absence of Busan from many of the reviewed city-based factors points to its main weakness, which is the low international awareness. Busan has some very important features, attractive for business in general and financial services in particular but their value cannot be efficiently utilised if the wider investment community does not know about them. As but one example, most people I’ve spoken to automatically assume that Korea Exchange is located in Seoul, whereas in fact it is in Busan, on the other side of the country. Busan’s absence from instrumental factors such as Global Cities Image, Global Power Cities, Office Occupation Costs, World’s Top Tourism Destinations and Price Levels impedes its performance as a financial centre;
- ◆ GDP composition – there are two aspects to that weakness: the share of business and finance services in Busan’s economy is quite low as compared to the peer group and Busan’s economy is not sufficiently diversified as it is too dependent on manufacturing. South Korea’s economy is considered by many reputable international bodies (notably the OECD, the IMF and the World Bank) as developed but Busan’s GDP composition is more reminiscent of an emerging economy. It is very similar to Shenzhen’s, the (emerging) manufacturing hub adjacent to (developed) Hong Kong. As noted, the financial centres ranked in the top 10 have a much higher economic exposure to business/finance services. On the positive side, Busan has a large potential demand for financial services and maritime services from other nearby cities such as Ulsan and Changwon;
- ◆ Economic openness and FDI – the review of instrumental factors portrays South Korea as a technologically advanced but relatively closed economy. Economic openness is pivotal for competitive and sustainable growth; it exposes local business actors to international competition but this forces them to become more competitive and also grants them access to broader markets and to more competitive products and services. Needless to say an international financial centre would be more competitive and attractive in a more open economy. The Global Talent Index by the EIU, the Global Enabling Trade Report by the WEF and the Global Innovation Index by INSEAD all expose Korea’s openness as a weakness;
- ◆ Labour market – labour market rigidities also hamper competitiveness. Modern businesses, particularly ones oriented towards higher value-added innovation and services rather than manufacturing, need to be agile and have more freedom to fire and hire. High unit labour costs inevitably lead to subsequent painful adjustments. Labour market rigidities were exposed as a weakness by the WEF and EIU’s Operational Risk Ratings;



- ◆ Political and regulatory environment – a number of instrumental factors point to weaknesses in the overall political and regulatory environment of Korea. This is a country rather than city-based feature but, as noted, a city operates within a wider framework and is subject to the country's political and regulatory environment. This weakness is reviewed in WEF's Global IT, Competitiveness and Enabling Trade reports, EIU's IT Industry (Business Environment) and Operational Risk Rating and INSEAD's Global Innovation Index. It is also a major drag on many other instrumental factors.

### Contradictory Indications

- ◆ Education and Human Capital – human capital is essential for a modern and developed economy because the higher up the value chain an economy is the more complex it is and therefore the more highly skilled professionals it needs. Some studies like WEF's Competitiveness rate education and human capital higher, others like EIU's Global City Competitiveness rate it as a weakness; others still like WEF's Global IT, EIU's Global Talent and INSEAD's Global Innovation Index make it less clear with certain aspects like talent, quality of labour force and tertiary education rated high while others, like general education and skills low. It is particularly worrisome that EIU's Global City Competitiveness, the only study that rates human capital specifically for Busan is not at all favourable. Most of the leading financial centres are very multi-cultural with a cosmopolitan atmosphere. The population of London and New York includes over one-third of foreign-born people. The number of foreign born in South Korea is tiny in comparison. In order to have a 'global' or 'international' centre it is important to have 'global' and 'international' players. Many people who have spent time in South Korea and returned to Europe report their perceptions of Seoul and Busan as cities that are fairly 'unfriendly' to foreigners;
- ◆ Innovation Environment – innovation engenders competitiveness, attracts talent and raises awareness. An essential characteristic of a developed economy is that it is knowledge based and innovation-driven. The instrumental factors review provides a mixed picture with some factors like WEF's Competitiveness and Global IT and INSEAD's Global Innovation (technology outputs, business sophistication) pointing to a strong innovation environment, while other like 2ThinkNow and INSEAD's innovation linkages raising concern. It is particularly worrisome that 2ThinkNow's Innovation Cities, a city-based factor, ranks Busan very low;
- ◆ GDP Size and Potential – Busan has a relatively strong GDP performance according to the Brookings Institution but measures like EIU's Global City economic strength and poor demographics point to declining potential. Busan's economy represents a sizeable share of the country's GDP, which implies that local authorities and interested groups should have an influence at the national level, but that share is insignificant as compared to Seoul's; in effect the latter overshadows Busan by far.



The GDP composition, which is as already noted reminiscent of an emerging country, indicates that there is ample scope for growth particularly with respect to higher value-added, less labour-intensive economic sectors (which would be a necessity given poor demographics);

- ◆ Institutional Framework – institutions act in much the same way as infrastructure (and are sometimes referred to as soft infrastructure) in that they boost economic productivity by providing an environment where businesses operate efficiently. They are however a function of the political and regulatory environment so if the latter less business-friendly, then the institutional framework would reflect that (the reverse is not always true). Korea's institutions are depicted as areas of concern in S&P's BICRA, WEF's Competitiveness and the Capital Access Index amongst others. There are however instances like the Global Enabling Trade report's border procedures efficiency, which indicate institutions are effective within the wider regulatory framework. And a very important finding is that EIU's Institutional Effectiveness rates Busan (not Korea) relatively high;
- ◆ Appeal – Global City Appeal by the EIU is a definite weakness of Busan but interestingly that same survey rates Busan's social and cultural character relatively high. Busan's global appeal is lagging because the city is not globally recognisable as much as Seoul is. It is not rated in a number of indices but possess a number of important and attractive traits that people and businesses can find quite appealing.

## 5.2. Strategic Priorities

The most efficient course of action usually entails concentrating efforts on turning the ambivalent traits into strengths along with building upon (and raising awareness of) existing strengths. Addressing the weaknesses is of course also necessary but not where main efforts should concentrate. Prioritizing actions to address weaknesses would usually result in concentrated effort yielding stronger weaknesses; it is likely to be more efficient to concentrate efforts and expenditure to enhance strengths and more importantly turning ambivalent factors into strengths. However an important part of this is making the wider international public aware of these strengths and, as already noted, Busan's main weakness is the lack of international awareness. Busan has a host of attractive features and it would need a concentrated effort to advertise this and raise international awareness.

With that in mind we have created a list of strategic priorities for Busan. We list these below:

- ◆ **raise international awareness for Busan's strengths** – participation of Busan in as many international surveys as possible, attracting media coverage to highlight its strengths, organising international conferences, fairs and exhibitions in order to attract foreign companies and position Busan as the place to do business. Busan is already ranked highly in the number of international conventions it holds. Busan is one of the best endowed cities that people in Europe and North America have never heard off. It should be remembered that it is the fifth largest container port in the world, has a comfortable living environment, is less than an hour's flight from Seoul;

- ◆ **invest into the development of an environment highly attractive for education, human capital and innovation** – Pusan University is a world class Top 500 university but is one of 11 in Korea and most of the rest, which are higher up the ranks are in Seoul or other cities<sup>11</sup>. Developing human capital and innovation is important for four reasons:
  - as a developed economy with unfavourable demographics Korea's economic future lies in knowledge and innovation;
  - as the site of Korea Exchange, a strategic port and a city looking to develop its share of business and finance services, Busan needs to develop its human capital base sufficiently;
  - combining financial and innovative prowess can engender entrepreneurship, which would in turn create a positive spiral of job creation, higher awareness and attractiveness and higher appeal to financial and human capital; and
  - becoming an education/innovation hub is a great form of differentiation for the brand Busan. From an outsider's point of view Seoul is a symbol of most things Korean – politics, business, industry. A secondary city can best differentiate and raise awareness of itself by focusing on a particular trait and being the education, innovation and hi-tech hub is a worthy goal for which Busan has a good basis;
- ◆ **continuously improve infrastructure, particularly with regard to ICT and air travel** – most surveys agree that Korea has a world class infrastructure and high levels of technological development and IT adoption. This status should be maintained and improved upon. An international financial centre and port necessitates a high quality transport, energy and ICT infrastructure. This is also a prerequisite for economic productivity and a facilitator of innovation, entrepreneurship and business sophistication. Busan does suffer from not having a larger and more modern international airport with many international visitors having to travel to Busan via Seoul;
- ◆ **engender an institutional framework as transparent and efficient as possible within the national framework** – while the institutional environment is not the most attractive feature of South Korea, this appears to be a matter of policy, not of incapacity. Institutional effectiveness is amongst the strongest features of Busan according to the EIU and if it is to position itself as an international financial centre and the place to do business, effective and transparent institutions are a must. This may serve as a means to attract business from outside as well as from inside Korea;
- ◆ **lobby for more openness to foreign competition at the national level** – a more open environment is in Busan's interests as it will raise interest and bring more competition from outside Korea, it will decrease Seoul's dominance as more businesses will be exploring the best offer and it will help Busan's international linkages.

<sup>11</sup> <http://www.shanghairanking.com/World-University-Rankings-2013/South-Korea.html>

The table below outlines a number of guidelines that have emerged from this report as priority targets for the private sector and for the urban and national levels of governance:

Local	National	Private Sector
Brand Development	Economic Openness and Exposure to Foreign Competition & Trade	Working Closely with Capital Markets
Education, Innovation & Human Capital	Efficiency of Public Services & Government	Working Closely with Universities
Infrastructure & Technology Usage	Simple and Transparent Regulatory Regime	Busan Brand
Local Institutions Efficiency & Transparency	Labour Market Liberalisation	R&D and Innovations

## 6. APPENDICES

### Appendix A – GFCI Methodology

The GFCI provides ratings for financial centres calculated by a ‘factor assessment model’ that uses two distinct sets of input:

- ◆ Instrumental factors (external indices that contribute to competitiveness): objective evidence of competitiveness was sought from a wide variety of comparable sources. For example, evidence about the telecommunications infrastructure competitiveness of a financial centre is drawn from a global digital economy ranking (supplied by the Economist Intelligence Unit), a telecommunication infrastructure index (by the United Nations) and an IT industry competitiveness survey (by the World Economic Forum). A total of 102 instrumental factors were used in GFCI 14. Not all financial centres are represented in all the external sources, and the statistical model takes account of these gaps.
- ◆ Financial centre assessments: by means of an online questionnaire, running continuously since 2007, we use 25,749 financial centre assessments drawn from 2,786 respondents.

The 102 instrumental factors were selected because the features they measure contribute in various ways to the fourteen competitiveness factors identified in previous research<sup>12</sup>. These are shown below:

Competitiveness Factors	Ranking of Importance
Availability of skilled personnel	1
Regulatory environment	2
Access to international financial markets	3
Availability of business infrastructure	4
Access to customers	5
A fair and just business environment	6
Government responsiveness	7
Corporate tax regime	8
Operational costs	9
Access to suppliers of professional services	10
Quality of life	11
Culture & language	12
Quality / availability of commercial property	13
Personal tax regime	14

<sup>12</sup> The Competitive Position of London as a Global Financial Centre”, Z/Yen Limited, The Corporation of London, 2005

Financial centres are added to the GFCI model when they receive five or more mentions in the online questionnaire in response to the question: “Are there any financial centres that might become significantly more important over the next 2 to 3 years?” A centre is only given a GFCI rating and ranking if it receives more than 200 assessments from other centres in the online survey.

At the beginning of our work on the GFCI, a number of guidelines were set out. Additional Instrumental Factors are added to the GFCI model when relevant and meaningful ones are discovered:

- ◆ indices should come from a reputable body and be derived by a sound methodology;
- ◆ indices should be readily available (ideally in the public domain) and be regularly updated;
- ◆ updates to the indices are collected and collated every six months;
- ◆ no weightings are applied to indices;
- ◆ indices are entered into the GFCI model as directly as possible, whether this is a rank, a derived score, a value, a distribution around a mean or a distribution around a benchmark;
- ◆ if a factor is at a national level, the score will be used for all centres in that country; nation-based factors will be avoided if financial centre (city)-based factors are available;
- ◆ if an index has multiple values for a city or nation, the most relevant value is used (and the method for judging relevance is noted);
- ◆ if an index is at a regional level, the most relevant allocation of scores to each centre is made (and the method for judging relevance is noted).

Creating the GFCI does not involve totalling or averaging scores across instrumental factors. An approach involving totalling and averaging would involve a number of difficulties:

- ◆ indices are published in a variety of different forms: an average or base point of 100 with scores above and below this; a simple ranking; actual values (e.g. \$ per square foot of occupancy costs); a composite ‘score’;
- ◆ indices would have to be normalised, e.g. in some indices a high score is positive while in others a low score is positive;
- ◆ not all centres are included in all indices;
- ◆ the indices would have to be weighted.

The guidelines for financial centre assessments by respondents are:

- ◆ responses are collected via an online questionnaire which runs continuously. A link to this questionnaire is emailed to the target list of respondents at regular intervals and other interested parties can fill this in by following the link given in the GFCI publications;
- ◆ financial centre assessments will be included in the GFCI model for 24 months after they have been received;
- ◆ respondents rating fewer than 3 or more than half of the centres are excluded from the model;

- ◆ respondents who do not say where they work are excluded;
- ◆ financial centre assessments from the month when the GFCI is created are given full weighting and earlier responses are given a reduced weighting on a log scale.

### Log Scale for Time Weightings

The financial centre assessments and instrumental factors are used to build a predictive model of centre competitiveness using a support vector machine (SVM). The SVM used for the GFCI is PropheZy – Z/Yen’s proprietary system. SVMs are based upon statistical techniques that classify and model complex historic data in order to make predictions of new data. SVMs work well on discrete, categorical data but also handle continuous numerical or time series data. The SVM used for the GFCI provides information about the confidence with which each specific classification is made and the likelihood of other possible classifications.

A factor assessment model is built using the centre assessments from responses to the online questionnaire. Assessments from respondents’ home centres are excluded from the factor assessment model to remove home bias. The model then predicts how respondents would have assessed centres they are not familiar with, by answering questions such as:

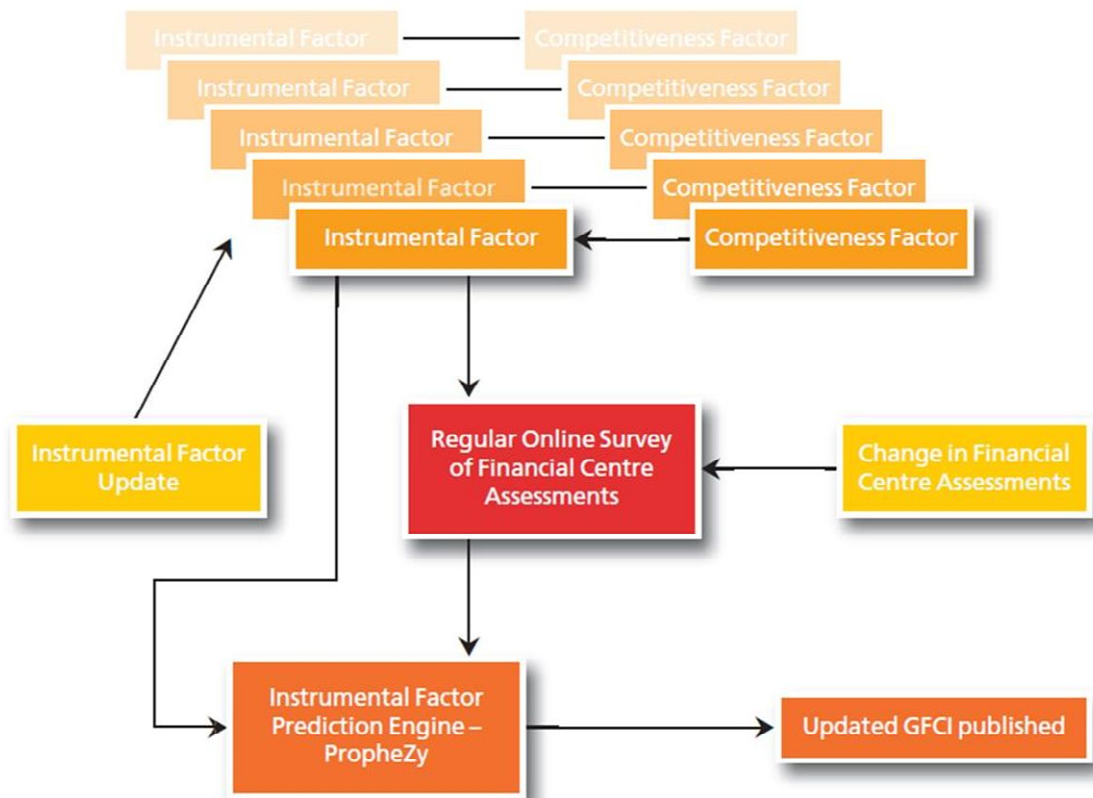
*If an investment banker gives Singapore and Sydney certain assessments then, based on the relevant data for Singapore, Sydney and Paris, how would that person assess Paris?*

Or

*If a pension fund manager gives Edinburgh and Munich a certain assessment then, based on the relevant data for Edinburgh, Munich and Zurich, how would that person assess Zurich?*

Financial centre predictions from the SVM are re-combined with actual financial centre assessments to produce the GFCI – a set of financial centre ratings. The GFCI is dynamically updated either by updating and adding to the instrumental factors or through new financial centre assessments. These updates permit, for instance, a recently changed index of rental costs to affect the competitiveness rating of the centres.

The process of creating the GFCI is outlined diagrammatically:



It is worth drawing attention to a few consequences of basing the GFCI on instrumental factors and questionnaire responses.

- ◆ Several indices can be used for each competitive factor and there are likely to be alternatives available once the GFCI is established;
- ◆ A strong international group of ‘raters’ can be developed as the GFCI progresses;
- ◆ Sector-specific ratings are being developed by using the business sectors represented by questionnaire respondents. This could make it possible to rate London as competitive in Insurance (for instance) while less competitive in Investment Management (for instance);
- ◆ Over time, as confidence in the GFCI increases, the factor assessment model can be queried in a ‘what if’ mode - “how much would London rental costs need to fall in order to increase London’s ranking against New York?”

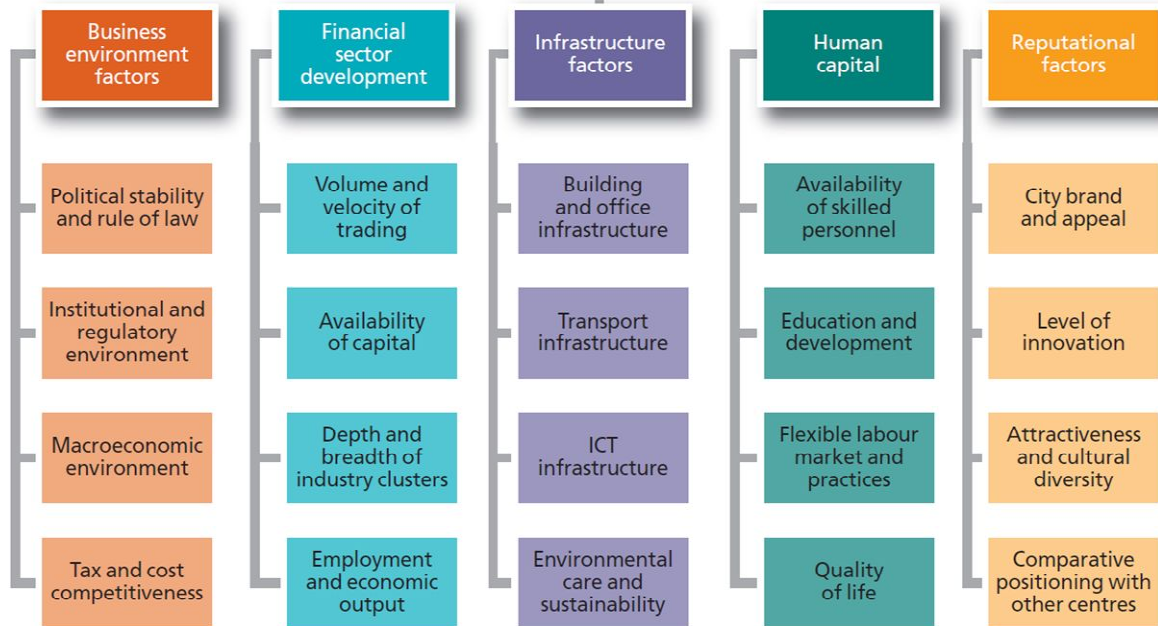
Part of the process of building the GFCI was extensive sensitivity testing to changes in factors of competitiveness and financial centre assessments. The accuracy of predictions given by the SVM was tested against actual assessments.

## APPENDIX B – GFCI



## APPENDIX B – Instrumental Factors

The instrumental factors are provided by a number of reputable organizations. The majority of these indices are publicly available and updated regularly. These factors are selected to reflect our model of the areas of competitiveness for financial centres:



### Instrumental Factors for Business Environment

Instrumental Factor	Source	Website
Business Environment	EIU	<a href="http://www.economist.com/markets/rankings">www.economist.com/markets/rankings</a>
Ease of Doing Business Index	The World Bank	<a href="http://www.doingbusiness.org/economyrankings">www.doingbusiness.org/economyrankings</a>
Operational Risk Rating	EIU	<a href="http://www.viewswire.com/index.asp?layout=homePubTypeRK">http://www.viewswire.com/index.asp?layout=homePubTypeRK</a>
Real Interest Rate	World Bank	<a href="http://data.worldbank.org/indicator/FR.INR.RINR">http://data.worldbank.org/indicator/FR.INR.RINR</a>
Projected City Economic Growth	McKinsey Global Institute	<a href="http://www.foreignpolicy.com/articles/2012/08/13">http://www.foreignpolicy.com/articles/2012/08/13</a>
Global Services Location Index	AT Kearney	<a href="http://www.atkearney.com">www.atkearney.com</a>
Corruption Perceptions Index	Transparency International	<a href="http://www.transparency.org/publications">www.transparency.org/publications</a>
Wage Comparison Index	UBS	<a href="http://www.ubs.com">www.ubs.com</a>
Corporate Tax Rates	Price Waterhouse Coopers	n/a
Employee Effective Tax Rates	Price Waterhouse Coopers	n/a
Personal Tax Rates	OECD	<a href="http://www.oecd.org">www.oecd.org</a>
Total Tax Receipts (as % of GDP)	OECD	<a href="http://oberon.sourceoecd.org">http://oberon.sourceoecd.org</a>
Bilateral Tax Information Exchange Agreements	OECD	<a href="http://www.oecd.org">http://www.oecd.org</a>



Economic Freedom of the World	Fraser Institute	<a href="http://www.freetheworld.com/release.html">www.freetheworld.com/release.html</a>
Banking Industry Country Risk Assessments	Standard & Poor's	<a href="http://www2.standardandpoors.com">http://www2.standardandpoors.com</a>
Government Debt as Percentage of GDP	CIA World Fact Book	<a href="https://www.cia.gov/library/publications/the-world-factbook/rankorder/2186rank.html">https://www.cia.gov/library/publications/the-world-factbook/rankorder/2186rank.html</a>
Political Risk Index	Exclusive Analysis Ltd	<a href="http://www.exclusive-analysis.com/">http://www.exclusive-analysis.com/</a>
Global Peace Index	Institute for Economics and Peace	<a href="http://www.visionofhumanity.org/info-center/global-peace-index-2011/">http://www.visionofhumanity.org/info-center/global-peace-index-2011/</a>
Financial Secrecy Index	Tax Justice Network	<a href="http://www.financialsecrecyindex.com/">http://www.financialsecrecyindex.com/</a>
Institutional Effectiveness	EIU	<a href="http://www.managementthinking.eiu.com/">http://www.managementthinking.eiu.com/</a>
City GDP Figures	Brookings Institute	<a href="http://www.brookings.edu/~media/research/">http://www.brookings.edu/~media/research/</a>
Number of Greenfield Investments	KPMG	<a href="http://www.kpmg.com/FR/fr/IssuesAndInsights/News/Documents/GPIA-KPMG-CIM-2012.pdf">http://www.kpmg.com/FR/fr/IssuesAndInsights/News/Documents/GPIA-KPMG-CIM-2012.pdf</a>
Open Government	The World Justice Project	<a href="http://worldjusticeproject.org/sites/default/files/WJP_Index_Report_2012.pdf">http://worldjusticeproject.org/sites/default/files/WJP_Index_Report_2012.pdf</a>
Regulatory Enforcement	The World Justice Project	<a href="http://worldjusticeproject.org/sites/default/files/WJP_Index_Report_2012.pdf">http://worldjusticeproject.org/sites/default/files/WJP_Index_Report_2012.pdf</a>

### Instrumental Factors for Financial Centre Development

Instrumental Factor	Source	Website
Capital Access Index	Milken Institute	<a href="http://www.milkeninstitute.org/research">www.milkeninstitute.org/research</a>
Securitisation	International Financial Services London (IFSL)	<a href="http://www.ifsl.org.uk">www.ifsl.org.uk</a>
Capitalisation of Stock Exchanges	World Federation of Stock Exchanges	<a href="http://www.world-exchanges.org">www.world-exchanges.org</a>
Value of Share Trading	World Federation of Stock Exchanges	<a href="http://www.world-exchanges.org">www.world-exchanges.org</a>
Volume of Share Trading	World Federation of Stock Exchanges	<a href="http://www.world-exchanges.org">www.world-exchanges.org</a>
Broad Stock Index Levels	World Federation of Stock Exchanges	<a href="http://www.world-exchanges.org">www.world-exchanges.org</a>
Value of Bond Trading	World Federation of Stock Exchanges	<a href="http://www.world-exchanges.org">www.world-exchanges.org</a>
Volume of Stock Options Trading	World Federation of Stock Exchanges	<a href="http://www.world-exchanges.org">www.world-exchanges.org</a>
Volume of Stock Futures Trading	World Federation of Stock Exchanges	<a href="http://www.world-exchanges.org">www.world-exchanges.org</a>
Domestic Credit Provided by Banks (% GDP)	World Bank	<a href="http://data.worldbank.org/indicator/FS.AST.DOMS.GD.ZS">http://data.worldbank.org/indicator/FS.AST.DOMS.GD.ZS</a>
Percentage of Firms Using Bank	World Bank	<a href="http://data.worldbank.org/indicator/IC">http://data.worldbank.org/indicator/IC</a>

Credit to Finance Investment		<a href="#">FRM.BNKS.ZS</a>
Total Net Assets of Mutual Funds	Investment Company Institute	<a href="http://www.icifactbook.org/">http://www.icifactbook.org/</a>
Islamic Finance	IFSL	<a href="http://www.thecityuk.com/what-we-do/the-research-centre/reports.aspx">http://www.thecityuk.com/what-we-do/the-research-centre/reports.aspx</a>
Net External Position of Banks	Bank for International Settlements	<a href="http://www.bis.org/statistics/bankstats.htm">http://www.bis.org/statistics/bankstats.htm</a>
External Position of Central Banks (as % GDP)	Bank for International Settlements	<a href="http://www.bis.org/statistics/bankstats.htm">http://www.bis.org/statistics/bankstats.htm</a>
Liner Shipping Connectivity	The World Bank	<a href="http://data.worldbank.org/indicator/IS.SHP.GCNW.XQ">http://data.worldbank.org/indicator/IS.SHP.GCNW.XQ</a>
Commodity Options Notional Turnover	World Federation of Stock Exchanges	<a href="http://www.world-exchanges.org">www.world-exchanges.org</a>
Commodity Futures Notional Turnover	World Federation of Stock Exchanges	<a href="http://www.world-exchanges.org">www.world-exchanges.org</a>
Global Connectedness Index	DHL	<a href="http://www.dhl.com/en/about_us/logistics_insights/global_connectedness_index_2012/gci_results.html">http://www.dhl.com/en/about_us/logistics_insights/global_connectedness_index_2012/gci_results.html</a>
City GDP Composition (Business/Finance)	Brookings Institution	<a href="http://www.brookings.edu/research/interactives/global-metro-monitor-3">http://www.brookings.edu/research/interactives/global-metro-monitor-3</a>

### Instrumental Factors for Human Capital

Instrumental Factor	Source	Website
Graduates in Social Science Business and Law	World Bank	<a href="http://www.worldbank.org/education">www.worldbank.org/education</a>
Gross Tertiary Education Ratio	World Bank	<a href="http://www.worldbank.org/education">www.worldbank.org/education</a>
Visa Restrictions Index	Henley & Partners	<a href="http://www.henleyglobal.com/citizenship/visa-restrictions/">http://www.henleyglobal.com/citizenship/visa-restrictions/</a>
Human Development Index	UN Development Programme	<a href="http://hdr.undp.org">http://hdr.undp.org</a>
Citizens Purchasing Power	UBS	<a href="http://www.ubs.com/1/e/ubs_ch/wealth_mgmt_ch/research.html">http://www.ubs.com/1/e/ubs_ch/wealth_mgmt_ch/research.html</a>
Quality of Living Survey	Mercer HR	<a href="http://www.mercerhr.com">www.mercerhr.com</a>
Happy Planet Index	New Economics Foundation (NEF)	<a href="http://www.happyplanetindex.org/explore/global/index.html">http://www.happyplanetindex.org/explore/global/index.html</a>
Number of High Net Worth Individuals	City Bank & Knight Frank	<a href="http://www.knightfrank.com/wealthreport/">http://www.knightfrank.com/wealthreport/</a>
Personal Safety Index	Mercer HR	<a href="http://www.mercerhr.com">www.mercerhr.com</a>
Homicide Rates	UN Office of Drugs and Crime	<a href="http://www.unodc.org/unodc/en/data-and-analysis/">http://www.unodc.org/unodc/en/data-and-analysis/</a>
World's Top Tourism Destinations	Euromonitor Archive	<a href="http://www.euromonitor.org">www.euromonitor.org</a>
Average Days with Precipitation per Year	Sperling's Best Places	<a href="http://www.bestplaces.net">www.bestplaces.net</a>
Spatial Adjusted Liveability Index	EIU	<a href="http://pages.eiu.com/rs/eiu2/images/EIU_BestCities.pdf">http://pages.eiu.com/rs/eiu2/images/EIU_BestCities.pdf</a>

Human Capital	EIU	<a href="http://www.managementthinking.eiu.com/">http://www.managementthinking.eiu.com/</a>
Global Talent Index	EIU	<a href="http://www.managementthinking.eiu.com/global-talent-index-2011-2015.html">http://www.managementthinking.eiu.com/global-talent-index-2011-2015.html</a>
Citywide CO2 Emissions	Carbon Disclosure Project	<a href="https://www.cdproject.net/en-US/Results/Pages/reports.aspx">https://www.cdproject.net/en-US/Results/Pages/reports.aspx</a>
Healthcare	EIU	<a href="http://pages.eiu.com/rs/eiu2/images/EIU_BestCities.pdf">http://pages.eiu.com/rs/eiu2/images/EIU_BestCities.pdf</a>
Global Skills Index	Hays	<a href="http://www.hays-index.com/">http://www.hays-index.com/</a>

## Instrumental Factors for Infrastructure

Instrumental Factor	Source	Website
Office Occupancy Costs	DTZ	<a href="http://www.dtz.com/Global/Research/">http://www.dtz.com/Global/Research/</a>
Office Space Across the World	Cushman & Wakefield	<a href="http://www.cushwake.com/cwglobal">www.cushwake.com/cwglobal</a>
Global Property Index	Investment Property Databank	<a href="http://www.ipd.com/">http://www.ipd.com/</a>
Real Estate Transparency Index	Jones Lang LaSalle	<a href="http://www.joneslanglasalle.co.uk">www.joneslanglasalle.co.uk</a>
Digital Economy Ranking	EIU	<a href="http://www.economist.com/markets/rankings">www.economist.com/markets/rankings</a>
Telecommunication Infrastructure Index	United Nations	<a href="http://www.unpan.org/egovkb/global_reports/08report.htm">http://www.unpan.org/egovkb/global_reports/08report.htm</a>
Quality of Ground Transport Network	World Economic Forum	<a href="http://www.weforum.org/en/initiatives/gcp/TravelandTourismReport">http://www.weforum.org/en/initiatives/gcp/TravelandTourismReport</a>
Quality of Roads	World Economic Forum	<a href="http://www.weforum.org/en/initiatives/gcp/TravelandTourismReport">http://www.weforum.org/en/initiatives/gcp/TravelandTourismReport</a>
Roadways per Land Area	CIA World Fact Book	<a href="https://www.cia.gov/library/publications/the-world-factbook/rankorder/2085rank.html">https://www.cia.gov/library/publications/the-world-factbook/rankorder/2085rank.html</a>
Railways per Land Area	CIA World Fact Book	<a href="https://www.cia.gov/library/publications/the-world-factbook/rankorder/2121rank.html">https://www.cia.gov/library/publications/the-world-factbook/rankorder/2121rank.html</a>
Physical Capital	EIU	<a href="http://www.managementthinking.eiu.com/">http://www.managementthinking.eiu.com/</a>
Connectivity	EIU	<a href="http://pages.eiu.com/rs/eiu2/images/EIU_BestCities.pdf">http://pages.eiu.com/rs/eiu2/images/EIU_BestCities.pdf</a>
IT Industry Competitiveness	BSA/EIU	<a href="http://globalindex11.bsa.org/country-table/">http://globalindex11.bsa.org/country-table/</a>
Energy Sustainability Index	World Energy Council	<a href="http://www.worldenergy.org/publications/3962.asp">http://www.worldenergy.org/publications/3962.asp</a>
City Infrastructure	EIU	<a href="http://pages.eiu.com/rs/eiu2/images/EIU_BestCities.pdf">http://pages.eiu.com/rs/eiu2/images/EIU_BestCities.pdf</a>
Urban Sprawl	EIU	<a href="http://pages.eiu.com/rs/eiu2/images/EIU_BestCities.pdf">http://pages.eiu.com/rs/eiu2/images/EIU_BestCities.pdf</a>
Metro Network Length	Metro Bits	<a href="http://mic-ro.com/metro/table.html">http://mic-ro.com/metro/table.html</a>
Global Information Technology	World Economic Forum	<a href="http://www.weforum.org/issues/global-information-technology/index.html">http://www.weforum.org/issues/global-information-technology/index.html</a>

## Instrumental Factors for Reputation

Instrumental Factor	Source	Website
World Competitiveness Scoreboard	IMD	<a href="http://www.imd.ch/research">www.imd.ch/research</a>
Global Competitiveness Index	World Economic Forum	<a href="http://www.weforum.org">www.weforum.org</a>
Global Business Confidence	Grant Thornton	<a href="http://www.grantthorntonibos.com">www.grantthorntonibos.com</a>
Foreign Direct Investment Inflows	UNCTAD	<a href="http://www.unctad.org">http://www.unctad.org</a>
FDI Confidence	AT Kearney	<a href="http://www.atkearney.com/images/global/pdf/Investing_in_a_Rebound-FDICI_2010.pdf">http://www.atkearney.com/images/global/pdf/Investing_in_a_Rebound-FDICI_2010.pdf</a>
City to Country GDP Ratio	World Bank Price Waterhouse Cooper	<a href="https://www.ukmediacentre.pwc.com/content/detail.aspx?releaseid=3421&amp;newsareaid=2">https://www.ukmediacentre.pwc.com/content/detail.aspx?releaseid=3421&amp;newsareaid=2</a>
GDP per Person Employed	World Bank	<a href="http://data.worldbank.org/indicator/SL.GDP.PCAP.EM.KD">http://data.worldbank.org/indicator/SL.GDP.PCAP.EM.KD</a>
Global Innovation Index	INSEAD/WIPO	<a href="http://www.globalinnovationindex.org/gii/">http://www.globalinnovationindex.org/gii/</a>
Global Intellectual Property Index	Taylor Wessing	<a href="http://www.taylorwessing.com/ipindex/">http://www.taylorwessing.com/ipindex/</a>
Retail Price Index	The Economist	<a href="http://www.economist.com/markets/indicators">www.economist.com/markets/indicators</a>
Price Levels	UBS	<a href="http://www.ubs.com/1/e/wealthmanagement/wealth_management_research/prices_earnings.html">http://www.ubs.com/1/e/wealthmanagement/wealth_management_research/prices_earnings.html</a>
Global Power City Index	Institute for Urban Strategies & Mori Memorial Foundation	<a href="http://www.mori-m-foundation.or.jp/english/index.shtml">http://www.mori-m-foundation.or.jp/english/index.shtml</a>
Global Cities Index	AT Kearney	<a href="http://www.foreignpolicy.com/story/cms.php?story_id=4509">http://www.foreignpolicy.com/story/cms.php?story_id=4509</a>
Number of International Fairs & Exhibitions	World Economic Forum	<a href="http://www.weforum.org/en/initiatives/gcp/TravelandTourismReport">http://www.weforum.org/en/initiatives/gcp/TravelandTourismReport</a>
Innovation Cities Global Index	2thinknow Innovation Cities™ Project	<a href="http://www.innovation-cities.com/innovation-cities-global-index-2010-city-rankings/">http://www.innovation-cities.com/innovation-cities-global-index-2010-city-rankings/</a>
City Global Appeal	EIU	<a href="http://www.managementthinking.eiu.com/">http://www.managementthinking.eiu.com/</a>
Global City Competitiveness	EIU	<a href="http://www.managementthinking.eiu.com/">http://www.managementthinking.eiu.com/</a>
The Big Mac Index	The Economist	<a href="http://www.economist.com/blogs/graphicdetail/2012/01/daily-chart-3">http://www.economist.com/blogs/graphicdetail/2012/01/daily-chart-3</a>
City Global Image	KPMG	<a href="http://www.kpmg.com/FR/fr/IssuesAndInsights/News/Documents/GPIA-KPMG-CIM-2012.pdf">http://www.kpmg.com/FR/fr/IssuesAndInsights/News/Documents/GPIA-KPMG-CIM-2012.pdf</a>
City's Weight in National Incoming Investments	KPMG	<a href="http://www.kpmg.com/FR/fr/IssuesAndInsights/News/Documents/GPIA-KPMG-CIM-2012.pdf">http://www.kpmg.com/FR/fr/IssuesAndInsights/News/Documents/GPIA-KPMG-CIM-2012.pdf</a>

Instrumental Factor	Source	Website
<b>Sustainable Economic Development</b>	<b>Boston Consulting Group</b>	<a href="https://www.bcgperspectives.com/content/interactive/public_sector_globalization_interactive_map_sustainable_economic_development/">https://www.bcgperspectives.com/content/interactive/public_sector_globalization_interactive_map_sustainable_economic_development/</a>
<b>Global Enabling Trade Report</b>	<b>World Economic Forum</b>	<a href="http://www.weforum.org/issues/international-trade">http://www.weforum.org/issues/international-trade</a>