Entrepreneurship & Global Competitiveness: A Study on India

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World Economic Forum (WEF) has ranked 139 countries in 2010-11 in order to assess each country's global competitiveness. The assessment has been made on the basis of 12 pillars, further classified under: 'basic requirements' (four pillars), 'efficiency enhancer' (six pillars) and 'innovation and sophistication factors' (two pillars).India is significantly lagging behind in 'basic requirements' as far as its global competitiveness is concerned. In only 'national savings rate' within the 3rd pillar (macroeconomic environment) under 'basic requirements', India is found to be highly competitive (rank 9). In the 10th pillar, (market size) India ranked as high as 4. In order to promote entrepreneurship as well as industrialisation, India needs to pay close attention to other areas, e.g., infrastructure, government debt, inflation, health and primary education, and higher education.

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Background

At the time of independence of India, the idea of rapid industrialisation of the economy had gained strong support from the policy makers. The ownership pattern consisted of three different types: (1) exclusive ownership of government, (2) the private sector; and (3) the joint sector. The Industrial (Department and Regulation) Act (IDR Act) was enacted in 1951. Though the government wanted to boost industrialisation, the IDR Act, with licensing powers in the hands of the government to regulate the pattern of industrial development in the country, proved itself to be the major obstacle towards reaching the objectives. "The bureaucracy acquired unprecedented powers and authority over all kinds of industrial activities and industrial entrepreneurs felt that they were placed at the mercy of ... bureaucrats" (Government of India 2002: 151). The Industrial Policy Resolution 1956 recorded 17 industries (for example, railways, air transport, iron and steel, atomic energy, arms and ammunition etc.) to be exclusively reserved for the public sec-

tor; 12 other industries envisaged to be state owned but also open for the private sector to supplement the efforts of the State; and the rest remained open for the private sector (although the option of state's participation remained open). Another round of reservation policy was initiated in 1967 with 47 items reserved for the small-scale sector, which was expanded to 504 items by 1978. In 1978, the reservation list was recast into NIC codes (National Industrial Classification of all economic activities) which again expanded items for the small-scale sector to 807. Since then, from time to time some items have been added to the list and also some items have been deleted from the list. However, since 1991, India has been liberalising its economy with delicensing as one of its main agenda, and today only five industries (alcoholic drinks, tobacco, defence equipments, industrial explosives including detonating fuses, gunpowder etc., and hazardous chemicals) have been retained under compulsory licensing of the IDR Act 1951. As far as foreign participation and international competition in this connection are concerned, this can be well-understood from the Second Report of the National Commission on Labour (Government of India 2002: 139) where it observed: "In the early years, Indian industry thrived within protective tariff walls. The policy was to encourage Indian industries and though foreign technical collaborations were encouraged, direct foreign investment in any corporate body was restricted to 40%. In 1991, this policy was changed completely and foreign majority investment was encouraged in a variety of industries, import restrictions were removed, customs tariff was brought down and the doors of the Indian economy were opened for foreign competition".

The pillars are not independent: they tend to reinforce each other, and a weakness in one area often has a negative impact on other areas.

Protection for small-scale industries has been grossly abandoned after the initiation of new economic policy in 1991. At present, there are only 21 items that are exclusively reserved for manufacture in the small-scale sector. Random de-reservation has been vehemently criticised by many scholars and activists. They argue that while such de-reservation has increased the scope for greater investments in manufacturing of various items by the formal sector, the new policy has posed tremendous threats to the large population engaged in the unorganised as well as informal sectors. One must agree with the view that the growth of entrepreneurship in the formal sector may be interrupted if large sections of population are either unemployed or living under the threat of losing livelihoods, and possess low level of skill and education, and have fragile health. Unless such problems are addressed through proper policy measures, the poor will continue to face barriers in reaping the fruits of industrial growth. Thus, very low level of living of a large population does not satisfy at least one initial condition (Myrdal 1968) of economic development and thus may hamper the existing industries to grow to their

full extent on the one hand and constrain, to some extent, the flow of new entries of firms into the regional industrial sector on the other. Entrepreneurship, as it is often argued, grows rapidly in an environment which is competitive. The World Economic Forum (WEF) has identified 12 pillars (or parameters) of competitiveness and has attempted to assess each country's position in the light of those pillars. We will focus here only on India with reference to those 12 pillars with an objective of assessing India's competitiveness against other countries, as illustrated in the WEF Global Competitiveness Report 2010-11. However, while the WEF reports their assessment of competitiveness of each pillar separately, it is important, as they assert, to keep in mind that the pillars "are not independent: they tend to reinforce each other, and a weakness in one area often has a negative impact on other areas" (World Economic Forum 2010: 8). Before delving into these issues, let us have a glimpse of government's objectives as well as institutional/procedural measures to spur entrepreneurship, and growth of entrepreneurship in India in the recent past on the basis of available evidence.

Institutional Reforms & Entrepreneurship

For rapid growth of entrepreneurship (or to attract entrepreneurs), a country needs to place itself in a highly competitive position in the global scenario. As far as the manufacturing sector is concerned, the Government of India has the following four-pronged objectives:

- To promote investments in the manufacturing sector and make the country a hub for both domestic and international markets.
- To increase the sectoral share of manufacturing in GDP to 25 per cent by 2022.
- To double the current employment level in the sector.
- To enhance global competitiveness of the sector.

In order to achieve these objectives the government has been carrying out reforms of the institutional/procedural aspects, among others, of starting/establishing firms or factories in the country. A brief discussion can help us understand the present state of procedural aspects.

There are three categories of industrial investment intention (i.e. investment proposal): (1) industrial entrepreneurs' memorandum (IEM), (2) letter of intent (LOI), and (3) direct industrial licence (DIL). IEM is meant for the de-licensed sector. All industrial undertakings exempt from obtaining an industrial licence are required only to file an IEM. An acknowledgement is issued immediately on receipt of Part 'A' of the IEM form and no further approval is required under the IDR Act, 1951 (Government of India 2010). Immediately after commencement of commercial production, Part 'B' of the IEM has to be filed by the entrepreneur. Note that filing an IEM has been retained primarily for the purpose of collecting data about the de-licensed sector on investment, employment, and type of industrial activity. For

those items which are under compulsory licencing (excluding those reserved for SSIs), till 2003 entrepreneurs were required to file LOI for further scrutiny and permission. However, it has been simplified in 2003. As a measure of simplification of procedures, from November 2003 the government has been granting industrial licences directly against applications, which are called direct industrial licence (DIL) (Government of India 2010). Thus, LOI has actually been converted into DIL, though currently both the options are open for the entrepreneurs and they can opt for either DIL or LOI. Table 1 suggests that LOI has been gradually coming down to a void phenomenon.

Foreign direct investment (FDI) in India can currently be made through two routes:

(1) Automatic route: Currently FDI is permitted in India in most of the sectors. The Reserve Bank of India (RBI) has been delegated powers to look into the matter so that smooth processing of proposals is ensured. The RBI gives permission to Indian companies to accept investment under this route without obtaining prior approval, subject to certain initial reporting (Government of India 2003).

(2) Other route: Some proposals need industrial licence to be procured from the government through the Foreign Investment Promotion Board (FIPB). They include (a) the items presently requiring an industrial licence under the IDR Act, 1951; (b) foreign investment being more than 24 per cent in the equity capital of firms which are manufacturing items reserved for small scale industries; and (3) manufacturing of all items that fall under locational restrictions under the New Industrial Policy of 1991 (Government of India 2003).

Recent Trends in Entrepreneurial Growth

Both number of investment proposals and number of actual investments are observed to be fluctuating over the years (Table 1). It is worth mentioning here that the number of proposals in a particular year may not necessarily solely reflect on the number of investment implemented in the same year. For example, some proposals of 2005 may have been implemented in 2006, but we do not have specific data relating to such occurrences. However, since it is a regular phenomenon in each year and not just a matter of a single year, we can ignore this phenomenon because of its constant feature in each year and examine the trends presented in Table 1 (Table 2 as well). One thing is evident from Table 1 that the trends of entrepreneurial growth do not portray a steady upward movement. While the number of investment proposal has reached the peak in 2006, the number of actual investment is seen to be the highest in 2009. As regards the number of foreign technology collaborations, we find that the trends are not impressive on this front (Appendix 1). However, we do not get real illustration of growth of entrepreneurship through the trends of such numbers unless the trends of financial investments over the years

Table 1: Investment Proposals & Investments Implemented (Nos)

	2005		2006		2007		2008		2009		2010		2011 (up to November)	
	Pro-posals	Imple-mented	Pro-posals	Imple-mented	Pro-posals	Imple-mented	Pro-posals	Imple-mented	Pro-posals	Imple-mented	Pro-posals	Imple-mented	Pro-posals	Imple-mented
IEM	6203	400 (6.45)	6261	263 (4.20)	3725	726 (19.49)	3979	541 (13.60)	3465	804 (23.20)	4296	636 (14.80)	3596	432 (12.01)
LOI	24		20		8		4		0		1		0	
DIL	111		90		85		102		10		39		24	
TOTAL	6338		6371		3818		4085		3475		4336		3620	

Note: IEM: Industrial entrepreneur memorandum;
LOI: Letter of Intent;
DIL: Direct Industrial Licence (the government has started issuing this licence since November 2003);
Figures in parentheses are "implemented" as a percentage of same year's "proposal".
Source: Secretariat for Industrial Assistance (SIA) Statistics, Department of Industrial Policy and Promotion, Ministry of Commerce and Industry, Government of India.

Table 2: Investment (Rs. Crore* at Current Price)

	2005		2006		2007		2008		2009		2010		2011 (up to November)	
	Pro-posals	Imple-mented	Pro-posals	Imple-mented	Pro-posals	Imple-mented	Pro-posals	Imple-mented	Pro-posals	Imple-mented	Pro-posals	Imple-mented	Pro-posals	Imple-mented
IEM	353956	35782 (10.11)	588550	14972 (2.54)	827500	19390 (2.34)	1522566	12465 (0.82)	1039848	14691 (1.41)	1731731	29735 (1.72)	1500303	11295 (0.75)
LOI	333		137		74		38		0		8		0	
DIL	2657		4693		6675		1248		411		4583		1902	
TOTAL	356946		593380		834249		1523852		1040259		1736322		1502205	

Note: See note of Table 1 for the full forms of IEM, LOI and DIL;
*1 crore = 10 million;
Figures in parentheses are "implemented" as a percentage of same year's "proposal".
Source: Secretariat for Industrial Assistance (SIA) Statistics, Department of Industrial Policy and Promotion, Ministry of Commerce and Industry, Government of India.

are considered. According to Table 2, the ratio of actual total financial investment to total financial investment proposals (both correspond to the row of IEM only) is seen to be the highest (more than 10 per cent) in 2005. This ratio dropped down to the bottom level in 2008 (the worst hit recession year). Although, later on, the ratio showed slow upward movement, until recently it could not reach the 2005-level again. Also, similar trends are seen for the total actual investment (at current price). The sluggish growth of investment suggests that reforms that have been undertaken so far have not been responded well by the flows of investments. Other factors that are instrumental to entrepreneurial growth need close attention. As already said above, the WEF assesses each country's competitiveness on the basis of some crucial parameters. We will focus on their report of 2010-11 and attempt to identify areas or sectors that India needs to improve in order to spur entrepreneurial force. Before we do this, let us just touch upon another important issue, performance of the manufacturing sector.

The trends of entrepreneurial growth do not portray a steady upward movement.

As regards performance of the organised manufacturing sector, Mehta (2011:65) has observed a decelerated trend growth rate of value added in the post reform period as compared to the pre-reform period. He did "not find any significant impact of the 1991 reforms on the organised manufacturing sector". Mazumdar (2008:75) found that while the organised manufacturing sector has experienced an enhanced capital formation during the liberalised era, "the output structure has increasingly moved in favour of services in response to the demand expansion pattern". Many scholars, as referred by Mehta, emphasise greater investment in infrastructure, technology (through investing in research and development), and education (especially to generate skilled labour force) to make Indian industry reap the fruits of globalisation (Lall 2001, Stiglitz 2006, Dahlman 2008, Singh 2008). Singh (2009) argues that "in an increasingly globalised and technologically advancing world, promoting industrialisation and growth is a multidimensional complex task that requires coordination from the government at various levels" (cited in Mehta 2011: 66). Such multidimensional complex task needs to be properly specified by identifying areas that are problematic and need proper attention. In this perspective, it is imperative to mention that growth of entrepreneurship and industrial performance are often considered to be dependent on global competitiveness of a country or a region. Global competitiveness, in turn, is conceptualised as a function of a set of variables or pillars (as has been termed by the WEF) and various sub-factors under those pillars. In this way, the WEF has shed some light on the "task" (to be done) relating to the "multidimensional complex" phenomenon. Let us now confine ourselves to the WEF report (2010-11) which will help us in assessing India's position against the global scenario, particularly in terms of the global competitiveness index (GCI).

India's Global Competitiveness

The WEF defines competitiveness as the set of institutions, policies, and factors that determine the level of productivity of a country. The process of competitiveness will be clearly understandable to us if we take a look at the following observations by the World Economic Forum (2010: 9):

"As a country becomes more competitive, productivity will increase and wages will rise with advancing development. Countries will then move into the efficiency-driven stage of development, when they must begin to develop more efficient production processes and increase product quality because wages have risen and they cannot increase prices. At this point, competitiveness is increasingly driven by higher education and training (pillar 5), efficient goods markets (pillar 6), well-functioning labour markets (pillar 7), developed financial markets (pillar 8), the ability to harness the benefits of existing technologies (pillar 9), and a large domestic or foreign market (pillar 10).

Finally, as countries move into the innovation-driven stage, wages will have risen by so much that they are able to sustain those higher wages and the associated standard of living only if their businesses are able to compete with new and unique products. At this stage, companies must compete by producing new and different goods using the most sophisticated production processes (pillar 11) and through innovation (pillar 12)."

As per the GCI as estimated by the WEF, India secures 51st rank out of 139 countries in 2010-11, whereas it was in 49th position (out of 133 countries) and 50th position (out of 134 countries) in the years of 2009-10 and 2008-09 respectively. By and large, it has been maintaining stable position in recent years, around the 50th rank. The GCI is composed of 12 pillars which are further categorised under three classifications: 'basic requirements', 'efficiency enhancer', and 'innovation and sophistication factors'. Of these three, India ranks better in efficiency enhancer (38) than in the other two (Table 3). Much improvement is needed especially on the basic requirements front in which the country ranks at 81 while in innovation and sophistication factors it ranks 42.

Much improvement is needed especially on the basic requirements front.

Basic Requirements

Which pillars are responsible for India's poor performance in the basic requirements? Table 3 suggests that in all the four pillars — institutions (1st pillar), infrastructure (2nd pillar), macroeconomic environment (3rd pillar), and health and primary education (4th pillar) — India occupies poor ranks in terms of global competitiveness. The rank of health and primary education is especially very poor (104), followed by infrastructure (86), macroeconomic environment (73), and institutions (58). We do not find a single indicator of the fourth pillar to be

Table 3 Twelve Pillars of Global Competitiveness Index: India's Ranks

Basic requirements (rank 81)		**Efficiency enhancer (rank 38)**		**Innovation & sophistication factors (rank 42)**	
1st pillar	Institutions (rank 58)	5th pillar	Higher education and training (rank 85)	11th pillar	Business sophistication (rank 44)
2nd pillar	Infrastructure (rank 86)	6th pillar	Goods market efficiency (rank 71)	12th pillar	Innovation (rank 39)
3rd pillar	Macroeconomic environment (rank 73)	7th pillar	Labour market efficiency (rank 92)		
4th pillar	Health & primary education (rank 104)	8th pillar	Financial market development (rank 17)		
9th pillar	Technological readiness (rank 86)	10th pillar	Market size (rank 4)		

Source: World Economic Forum (2010)

occupying a position within the first 50 ranks (Table 4). Issues like infant mortality as well as life expectancy and diseases like malaria and tuberculosis on the health front, and both the quantity and quality aspects of India's primary education have come up as real concerns that have been continuing to adversely affect India's competitiveness. Only in two indicators within the infrastructure pillar India is found to be competitive. They include quality of railroads and available airline seat kilometres. All other indicators hold back Indian infrastructure from becoming competitive. Within the pillar of macroeconomic environment, country credit rating indicator (India's credit worthiness or ability to repay debt) falls into the first 50 countries (albeit on the boundary, i.e. rank 50), alongside very good position in national savings rate (rank 9). As far as institutions of India are concerned, 6 out of 21 indicators are seen to have fallen in the first 50 ranks. They include judicial independence (41), efficiency of legal framework in settling disputes (47), efficiency of legal framework in challenging regulations (37), transparency of government policymaking (42), strength of auditing and reporting standards (45), and strength of investor protection (33).

We do not find a single indicator of the fourth pillar to be occupying a position within the first 50 ranks.

Efficiency Enhancer

India's two remarkable strengths are its financial market development (rank 17) and its market size (4) — the 8th and 10th pillars, respectively. These two pillars have kept efficiency enhancer ahead of the other two categories (i.e. basic requirements, and innovation and sophistication factors). In terms of both the domestic

Table 4: Global Competitiveness Index in Detail: Ranks of India

Institutions	Infrastructure	Macroeconomic environ ment
Property rights (61)	Quality of overall infrastructure (91)	Government budget balance (81)
Intellectual property protection (66)	Quality of roads (90)	National savings rate (9)
Diversion of public funds (71)	Quality of railroad infrastructure (23)	Inflation (123)
Public trust of politicians (88)	Quality of port infrastructure (83)	Interest rate spread (65)
Irregular payments and briberies (83)	Quality of air transport infrastructure (71)	Government debt (115)
Judicial independence (41)	Available airline seat kilometres* (12)	Country credit rating (50)
Favouritism in decisions of government officials (72)	Quality of electricity supply (110)	
Wastefulness of government spending (57)	Fixed telephone lines (110)	
Burden of government regulation (95)	Mobile telephone subscriptions (118)	
Efficiency of legal framework in settling disputes (47)		
Efficiency of legal framework in challenging regulations (37)		
Transparency of government policymaking (42)		
Business costs of terrorism (127)		
Business costs of crime and violence (67)		
Organised crime (73)		
Reliability of police services (68)		
Ethical behaviour of firms (70)		
Strength of auditing and reporting standards (45)		

Table 4 contd....

Efficacy of corporate boards (76)	
Protection of minority shareholders' interests (55)	
Strength of investor protection (33)	

Note : Figures in parentheses denote ranks, while figures in boldface indicate ranks of notable competitive advantages.
*Available airline seat kilometres (ASK) is a measure of an airline flight's passenger carrying capacity. It is equal to the number of seats available multiplied by the number of kilometres flown.

Source : World Economic Forum (2010)

Table 4 continued.....

Health and primary education	**Higher education and training**	**Goods market efficiency**
Business impact of malaria (102)	Secondary education enrolment rate (108)	Intensity of competition in local market (30)
Malaria incidence (108)	Tertiary education enrolment rate (101)	Extent of market dominance (26)[1]
Business impact of tuberculosis (87)	Quality of the educational system (39)	Effectiveness of anti-monopoly policy (29)
Tuberculosis incidence (101)	Quality of math and science education (38)	Extent and effect of taxation (36)[2]
Business impact of HIV/AIDS (99)	Quality of management schools (23)	Total tax rate (123)[3]
HIV prevalence (71)	Internet access in schools (70)	Number of procedures required to start a business (121)(Footnotes)
Infant mortality (111)	Local availability of research and training services (51)	Time required to start a business (93)
Life expectancy (109)	Extent of staff training (59)	Agricultural policy costs (81)[4]
Quality of primary education (98)		Prevalence of trade barriers (96)[5]

1. Dominated by a few business groups or spread among many firms.
2. Impact of the level of taxes on incentives to work or invest.
3. The total tax rate measures the amount of taxes and mandatory contributions payable by the business in the second year of operation, expressed as a share of commercial profits.
4. Is agricultural policy in the country excessively burdensome for the economy? Or, it balances the interests of taxpayers, consumers, and producers.
5. To what extent do tariff and non-tariff barriers limit the ability of imported goods to compete in the domestic market in your country?

Primary education enrolment rate (95)	Trade tariffs (Trade-weighted average tariff rate) 124
	Prevalence of foreign ownership of companies in the country (81) Business impact of rules on FDI (46) Burden of customs procedures (81) Degree of customer orientation (64)[6] Buyer sophistication (43)[7]

Note : Figures in parentheses denote ranks, while figures in boldface indicate ranks of notable competitive advantages.
Source : World Economic Forum (2010)

Table 4 continued.....

Labour market efficiency	**Financial market development**	**Technological readiness**
Cooperation in labour-employer relations (49)	Availability of financial services (45)	Availability of latest technologies (41)
Flexibility of wage determination (whether set by a centralised bargaining process, or by each individual company) (61)	Affordability of financial services (38)[8]	Firm-level new technology absorption (39)
Rigidity of employment (77)[9]	Financing through local equity market (10)	FDI and technology transfer (does FDI brings new technology?) (28)
Hiring and firing practices (determined by employers or regulations) (89)	Easy access to loans with only a good business plan and no collateral (39)	Internet users (118)
Redundancy costs (89)[10]	Venture capital availability (31)	Broadband internet sub scriptions (100)

6. How well do companies in your country treat customers?
7. In India, how do buyers make purchasing decisions? Is it based solely on the lowest price or on a sophisticated analysis of performance attributes?
8. Does competition among providers of financial services in your country ensure the provision of financial services at affordable prices?
9. This index is the average of three sub-indexes: difficulty of hiring, rigidity of hours, and difficulty of firing. The three sub-indexes have several components and all take values between 0 and 100, with higher values indicating more rigid regulation.
10. This variable estimates the cost of advance notice requirements, severance payments, and penalties due when terminating a redundant worker. In Bolivia and Venezuela it is not possible to terminate a worker for economic reasons.

Pay and productivity (whether pay is related to worker productivity) (61)	Restriction on international capital flows (75)	Internet bandwidth (119)
Reliance on professional management (rather than less qualified relatives or friends) (49)	Soundness of banks (whether leaned towards insolvency or towards soundness) (25)	
Brain drain (Does your country retain and attract talented people?) (34)	Regulation and supervision of security exchanges (15)	
Female participation in labour force (128)	Legal rights index (protection of rights of both borrowers and lenders) (20)	

Note : Figures in parentheses denote ranks, while figures in boldface indicate ranks of notable competitive advantages.
Source : World Economic Forum (2010)

Table 4 continued.....

Market size	**Business sophistication**	**Innovation**
Domestic market size index (GDP plus imports minus exports) (4)	Local supplier quantity (7)	Capacity for innovation, not just imitation (33)
Foreign market size index (value of exports of goods and services) (4)	Local supplier quality (60)	Quality of scientific research institutions (30)
State of cluster development (29)	Company spending on R&D (37)	
	Nature of competitive advantage (ranging from low-cost or natural resources to unique products and processes) (61)	University-industry collaboration in R&D (58)
	Extent of value chain (42)[11]	Govt procurement of advanced tech products (76)
	Control of international distribution (64)[12]	Availability of scientists and engineers (15)
	Production process sophistication (ranging from labour-intensive or technology of previous generations to the world's most efficient) (43)	Utility patents (i.e. patent for invention) per million population (59)

11. Companies do not only produce but also perform product design, marketing sales, logistics, and after-sales services.
12. Whether international distribution and marketing from your country are primarily owned and controlled by domestic companies.

	Extent of marketing (whether sophisticated marketing tools and techniques are used) (57)
	Willingness to delegate authority of decision making (ranging from top person to business unit heads and other lower-level managers) (48)

Note : Figures in parentheses denote ranks, while figures in boldface indicate ranks of notable competitive advantages.
Source : World Economic Forum (2010)

market size and foreign market size (measured in terms of value of exports of goods and services), India stands in the front line (Table 4). Financial market development indicates about how efficiently saved resources are allocated to the private sector. All the indicators of the 8th pillar belong to the first 50 ranks, except for the restriction on capital flows (rank 75). In the light of the WEF rankings, restrictive regulations in India related to international capital flows call for revision towards further improvement.

India is lagging behind in producing the right mix of products and services, given its particular supply-and-demand conditions.

The WEF evaluation illustrates that the other efficiency enhancers viz. higher education, goods market efficiency, labour market efficiency, and technological readiness need close attention from the policymakers for improvements (Table 3). Within the pillar of higher education and training, while the 'quality'-related indicators do not seem to be of serious worry (all the three quality-related indicators lie within the first 50 ranks), issues of enrolment, among others (such as internet access in schools, local availability of research and training services,[13] and extent of staff training[14]), raise concerns. Next is the 6th pillar, i.e. goods market efficiency. India, according to the World Economic Forum (2010), is lagging behind in producing the right mix of products and services, given its particular supply-and-demand conditions. Demand conditions often refer to buyer sophistication which leads firms to be more innovative and efficient. Six indicators (including buyer sophistication and FDI rules) of the pillar of market efficiency of India are found to be relatively competitive (lying within the first 50 ranks), while the other nine are found not so competitive (Table 4). The rankings of the indicators suggest that market in India is more inclined to indulging in an environment of competition than monopolistic dominance as against many other countries (not all other countries, of course). But, number of procedures and time required to start a business, among others, call for further attention. However, issues such as agricultural policy and trade tariff/barriers need to be reviewed from the international political economy per-

13. To what extent are high-quality, specialised training services available in a country?
14. To what extent do companies in a country invest in training and employee development?

spective, not just from the perspective of development of international trade.

The ranks in the 7th pillar (i.e. labour market efficiency) do not demonstrate India's competitiveness in the world scenario. According to the WEF, its rank is 92 (Table 3). Three of the indicators, viz. cooperation in labour-employer relations, reliance on professional management (rather than less qualified relatives or friends), and brain drain (i.e. retaining and attracting talented people) are found to be somewhat favourable for India as compared to many other countries. Conversely, issues like wage determination (company's freedom to set wage over centralised bargaining), employment rigidity (with regard to hiring, work-hours, firing etc.), redundancy cost, productivity-related pay, female participation in labour force have put India on the back foot (Table 4). However, as far as hiring and firing practices (whether determined by regulations or employers) are concerned, India definitely lacks reasonable competitiveness in terms of its ranking (rank 89), but one thing needs to be kept in view that such practices cannot solely be left at the hands of employers since some regulations are required to prevent misuse of such authority.

As far as hiring and firing practices are concerned, India definitely lacks reasonable competitiveness in terms of its ranking.

The 8th pillar, viz. financial market development (rank 17), is a huge strength of India (Table 3). Excepting the only case of one variable, viz. 'restriction on international capital flows', the other variables look powerful (Table 4). Although financial services and capital market environment are conducive to the growth of the formal sector, more inclusive growth and greater (or even) economic prosperity may be promoted through extending similar financial services to the unorganised sector. A situation where one half of India is welcomed to the financial market and the other *large* half is trapped into severe scarcity of finance may not be able to build a robust economy for the future. Since this is a very crucial as well as strong pillar of India, this can be used to strengthen the other pillars of the country. Policymakers need to formulate and implement proper strategy for such development. For example, credit availability to the informal or unorganised sector may help in catering to the rural market with greater number of product mix (or output), which will further raise the income level. This will have a positive effect on the country's macroeconomic environment (3rd pillar), including government revenue. The positive spill-over effect is the improved infrastructure (2nd pillar), and so on. So, a virtuous circle can be set in motion. Moreover, we have earlier observed that India's rank in terms of national saving rate is quite impressive. A good saving rate, coupled with wider distribution of financial services (both in urban and rural areas), may advance the economy towards higher growth. India urgently needs to adopt a broad-based lending policy on the one hand, and disperse the credit market facilities in the remote areas on the other.

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As regards the 9th pillar, i.e. technological readiness, India does not occupy a competitive position (Table 3). Table 4 suggests that three factors related to internet usage need special attention to improve the competitiveness of the 9th pillar.

As already discussed above, India draws attention of the world business community due to the sheer size of its market (10th pillar). India's market size occupies rank 4 (Table 3). In terms of both the domestic market size and the foreign market size, India's position looks impressive (Table 4). However, we need to keep in mind that India still has a quarter of the world's hungry (Narayan 2011). This means that more employment is needed to provide income in the hands of the poor. Again, the poor has very limited opportunity to be absorbed in the organised sector due to lack of skills and education and, thus, unorganised sector needs to be strengthened alongside. This will also augment the scope further growth of market in due course.

Innovation & Sophistication Factors

In terms of innovation and sophistication factors, India ranks 42nd position in the world (i.e. within the first 50 positions). In this category, such a position has been secured by India due to the performance in both the 11th and 12th pillars. The rank in the 11th pillar, i.e. business sophistication, is 44, whereas it ranks 39 in the 12th pillar, i.e. innovation (Table 3).

Let us first take a look at the pillar of business sophistication (Table 4). While there are numerous local suppliers in India, quality of suppliers raises questions. Among others, four factors, viz. state of cluster development, extent of value chain, production process sophistication, and willingness to delegate authority of decision making, are found to lie within the first 50 ranks, whereas the other three factors, i.e. nature of competitive advantage, control of international distribution, and extent of marketing , need improvement.

There are seven variables in the 12th pillar of which four (capacity for innovation, quality of scientific research institutions, company spending on R&D, and availability of scientists and engineers) have competitive advantage, while university-industry collaboration in R&D, government procurement of advanced technology products, and patent for invention, lack competitive advantage.

Conclusion

Like before, the WEF has ranked 139 countries in 2010-11 in order to assess each country's global competitiveness as compared to others. The assessment has been made on the basis of 12 pillars which have been further classified under three categories, viz. 'basic require-

ments' (four pillars), 'efficiency enhancer' (six pillars) and 'innovation and sophistication factors' (2 pillars). According to the WEF reports, India is significantly lagging behind in 'basic requirements' as far as its global competitiveness is concerned. Only in one variable, namely 'national savings rate' within the 3rd pillar (i.e. macroeconomic environment) under the category of 'basic requirements', India is found to be highly competitive. In the 10th pillar itself, i.e. market size, India occupies rank 4 which is highly competitive as compared to most of the other countries. However, in order to promote entrepreneurship as well as industrialisation, India needs to pay close attention to various other sectors. For example, among others, overall infrastructure, government debt, inflation, health and primary education, higher education and training require substantial improvements.

Appendix 1: Number of Foreign Technology Collaborations

Year	Number of foreign technology collaborations approved (RBI + Government)
1991-1992 (August - March)	696
1992-93	727
1993-94	692
1994-95	893
1995-96	921
1996-97	702
1997-98	629
1998-99	564
1999-00	484
2000-01	411
2001-02	281
2002-03	293
2003-04	299
2004-05	90
2005-06	83
2006-07	81
2007-08	116
2008-09	98
2009-10	52
Total	8112

Source: Government of India (2010)

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