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From Informal to Formal: A Meta- Analysis of What Triggers the Conversion in Asia

Background paper for the GEPR Chapter on Informality

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February 2019

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Asia has, after Sub-Saharan Africa, the largest share of all workers in informal employment, at 68.2%. Asia also happens to be the region with the fastest GDP growth rate on a relatively consistent basis. By contrast, Sub-Saharan Africa (SSA) has never had the kind of consistent growth rate as Asia. Similarly, Latin America/Caribbean (LAC), like SSA, had experienced two lost decades in the 1980s and 1990s. If growth alone (or even predominantly) was a determinant of the extent of informality then there should have been much lower informality in the Asian region than the other regions, LAC or SSA. The reality is, on the other hand, quite complex.

The paper is organized as follows. Section 1 presents the quantitative profile of informality in Asia. Section 2 focuses on the relationship between economic growth and informality, in the light of the development economics literature on informality. It specifically goes on to examine this relationship in the case of the two largest economies in Asia, i.e. China and India, which account for a high share of total informal employment in the region, by virtue of their very large workforces. It also discusses this relationship in the course of Indonesia's development. Section 3 examines evidence from a range of countries across the entire region in respect of the regulations that govern firms, and how these impact the decision to formalize. It especially presents evidence on which kind of instruments works better, "sticks" or "carrots" as triggers to promote formalization. A number of interventions in the form of "sticks" are examined in different countries. Then interventions in the form of "carrots" are discussed in several countries. On the carrots discussion close attention is paid to ILO Recommendation 2004 which lists measures that in its view promote formalization (six points under Article 25 of R204). They are: *a) business entry reforms; b) simplified tax and contributions assessment and payment regimes; c) access to public procurement; d) access to inclusive financial services; e) access to entrepreneurship training, skills development and tailored business development services; and f) access to social security coverage.*

The last one – social security coverage – specifically merits a separate section 4 in the paper, given that it focuses on ensuring the formalization of workers, rather than enterprises, which has been a defining feature of informality ever since the International Conference of Labour Statisticians expanded in 2003 to cover worker informality (apart from firm informality as defined by ICLS 1993), which itself is based on the availability or not of social insurance for workers. Section 5 of the paper summarises the recommendations and conclusions.

1. Trends in Asian informality

The Asia region¹ has the highest share (68.6%) of informal employment (agricultural and non-agricultural) in the world, after Africa (85.8%); though the Arab States share of informal

¹ The sub-regions, with the comprising countries, within Asia are: East Asia (Hong Kong, China; Japan; Republic of Korea; Macau, China; Mongolia; and Taiwan, China); Southeast Asia (Brunei, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand, Timor-Leste, Vietnam); Pacific Islands (Australia, Cook

employment (68.6%) is very similar to Asia (Table 1). This high share, however, is distributed across the region with a very high variance between sub-regions, with South Asia having the highest share (87.8%). Informality is much higher in South Asia and even Southeast Asia (75.2%), than in East Asia (50.7%). Without China, East Asia's informality share drops to 26.6%, which is hardly surprising since the other countries in the region either are high-income or have very small populations.

Like in all other regions, of the three locations where informal workers are found (in the informal sector, in the formal sector, in households) the largest share is in the informal sector.² It is also notable that outside of Africa, a very high share of employers are informal, which suggests that informal firms predominate; this is especially relevant for this paper on mechanisms that could trigger informal firms to formalize. Also, 64% of all employees in the workforce are informal in South Asia; and 53.6% in Southeast Asia/Pacific. In Latin America that share is 37% of all employees, and in Africa 57%.

If one examines the age-composition of informal workers, it is quite worrying that 95.5% in South Asia and 75% in South East of all youth in the workforce are in informal employment. This indicates that there does not appear to have any significant trend in favour of formality in Asia even in recent years among youth. In recent years, even in China this share of informal employment among youth has not reversed, which is strongly suggested by the fact that in China the share of youth in the Asian workforce that are informal is 86.3%, while without China it increases only slightly to 91.8%.

Of course, the global trend that lower levels of education correlates with informal work also holds in every sub-region of Asia.

Of the entire *rural* workforce, 85% in Asia is informal, and this uniformly is true broadly speaking in every sub-region of Asia. At the same time the share of informal workers in the total *urban* workforce drops sharply in all sub-regions of Asia, though to a much lower extent in South Asia.

The share of informal workers in the total agricultural workforce is everywhere in the world (including Asia) extremely high (over 85%). But the share is lower in industry everywhere as well, as in Asia. Similarly, the share of informal workers in the services workforce is lowest everywhere in the world, as in Asia. However, as expected, in Asia the share of informal workers in each sector is the highest in Asia (even compared to Africa).

Islands, Fiji, Kiribati, New Zealand, Samoa); and South Asia (Afghanistan, Bangladesh, India, Iran, Maldives, Pakistan, Sri Lanka).

² Persons employed in the informal sector (including those rare persons who are formally employed in the informal sector 8): ■ Employers in informal enterprises; ■ Employees in informal enterprises; ■ Own-account (self-employed) workers in their own informal enterprises; ■ Contributing family workers working in informal enterprises; and ■ Members of informal producers' cooperatives. Persons in informal employment outside the informal sector, specifically: ■ Employees in formal enterprises not covered by social protection through their work; ■ Paid domestic workers not covered by social protection through their work; and ■ Contributing family workers working in formal enterprises.

Table 1: Asia and the Pacific (circa 2016). Total informal employment (agricultural and non-agricultural) (in percentages)

	World	North America (USA+Canada)	Latin America and the Caribbean	Africa	Arab States	Asia and the Pacific						Europe and Central Asia
						Total	Without China	Eastern Asia	Without China	SouthEastern Asia and the Pacific	Southern Asia	
Share of informal employment	61.2	18.1	53.1	85.8	68.6	68.2	77.6	50.7	26.6	75.2	87.8	25.1
In the informal sector	51.9	16.0	37.4	76.0	60.9	58.6	65.5	44.7	21.5	57.4	77.4	19.4
In the formal sector	6.7	1.7	11.6	5.5	7.5	6.9	7.4	5.9	4.3	9.7	6.9	5.3
In households	2.5	0.5	4.1	4.3	0.2	2.5	4.2	0.1	0.8	6.9	3.5	0.5
Status in employment												
Employees	39.7	12.7	37.2	56.8	54.3	49.8	49.1	44.3	13.5	53.6	64.2	15.4
Employers	50.7	5.5	43.4	77.9	75.1	53.6	54.2	50.0	35.3	43.7	83.4	39.9
Own-account workers	86.1	68.6	84.1	94.3	94.3	86.2	89.0	77.4	68.4	74.4	94.0	60.0
Contributing family workers	100.0	100.0	100.0	100.0	100.0	100.0						100.0

Gender												
Male	63.0	18.9	52.3	82.7	70.2	70.5	78.4	52.2	25.4	75.2	86.8	26.4
Female	58.1	17.3	54.3	89.7	61.8	64.1	48.4	48.4	28.3	75.4	90.7	23.6
Age												
Youth (15-24)	77.1	12.8	62.4	94.9	85.1	86.3	90.8	70.3	22.8	87.0	95.5	35.7
Adults (25+)	58.7	19.5	52.5	82.8	61.1	67.1	78.4	49.5	22.9	76.0	89.6	21.8
25-29	62.6	17.5	46.4	85.5	68.8	70.8	82.2	53.8	16.0	76.3	90.6	26.4
30-34	58.6	18.5	47.0	83.1	61.0	67.3	80.2	46.2	14.1	74.2	89.8	21.8
35-54	55.7	19.1	51.3	79.7	56.9	63.8	77.8	47.0	17.0	74.9	88.3	20.0
55-64	59.2	21.2	59.9	84.2	62.8	72.4	78.5	56.8	30.5	79.1	90.6	21.5
65+	77.9	23.7	78.0	96.0	71.7	86.3	86.8	72.4	55.4	83.9	98.3	40.8
Education												
No education	93.8	13.6	82.2	94.0	88.6	94.9	95.1	89.2	94.6	95.0	95.2	77.1
Primary education	84.6	32.8	72.5	88.5	77.0	89.7	91.0	84.8	77.6	88.7	92.7	40.9
Secondary education	51.7	18.2	50.8	68.1	51.9	58.9	64.7	52.1	24.1	70.3	84.2	23.3
Tertiary education	23.8	18.5	33.5	27.0	22.4	30.7	46.1	12.8	14.2	43.5	72.0	15.2

Area of residence												
Rural	80.0	23.4	68.5	88.3	69.3	85.2	86.9	80.4	48.8	75.5	92.8	33.2
Urban	43.7	17.6	47.0	76.3	63.9	47.4	57.1	32.9	19.4	55.3	75.1	19.4
Industrial sector												
Agriculture	93.6	50.7	79.2	97.9	95.6	94.7	96.9	82.3	88.6	91.7	99.3	71.6
Industry	57.2	16.7	49.1	77.4	80.9	68.8	71.1	49.0	25.3	67.8	81.9	21.9
Services	47.2	17.9	49.0	70.2	57.3	54.1	60.9	46.1	20.2	60.6	75.7	20.2
Size of enterprise ¹												
Own-account workers	86.1	68.6	84.1	94.4	94.3	86.2	89.0	77.4	68.4	74.4	94.0	60.0
2-9 persons	74.2	-	72.4	89.2	76.6	80.7	83.2	74.7	45.0	-	88.1	35.9
10-49 persons	49.9	-	29.1	60.3	29.2	57.5	47.1	61.9	11.8	-	50.0	20.9
50 persons and more	32.9	-	15.3	38.9	19.1	38.0	44.2	29.1	6.1	-	57.5	15.6

Note: Global and regional estimates based on 119 countries representing more than 90 per cent of the world employed population. Source: ILO, Women and men in the informal economy: a statistical picture (third edition), ILO: Geneva, 2018; Harmonized series ILO and F. Bonnet

2. Growth and Informality

This paper argues that it is the pattern of growth and its labour intensity that is more connected to the extent of informality one finds in countries, not GDP growth per se. We will also make this argument especially by using two large countries with large informal sectors, China and India. We also discuss the relationship between growth and informality in the case of another large economy in Asia – Indonesia. First we will examine the literature and evidence across countries in respect of the relationship of growth with informality, especially providing examples from Asia, before turning to China and India.

In the development economics literature theories that explain the extent of informal employment consist of two different types: the first tend to link the pace and the pattern of GDP growth and the second group tends to focus on institutional factors. The institutional factors are not dissimilar from the ones mentioned in ILO recommendation 204, as possible instruments to promote the transition from informality to formality. We discuss each set of explanation in turn, and hence, by inference, possible instruments or drivers of the transition from informality to formality in developing countries.

Examining a cross section of countries at varying levels of per capita income we may conclude that informal employment is negatively related to the level of GDP per capita. In other words the dynamic that is suggested by this correlation is that economic growth and development generally would be characterized by an increase in formal jobs both agricultural as well as non-agricultural. However, a closer look at the data would suggest very strong qualifications or caveats before arriving at such a conclusion. Jutting and de Laiglesia (2009) and Kucera (2009) present data by region over three decades from 1975 to 2007 which shows practically no relationship between GDP growth and informal employment for any of the major regions of the world: Latin America, south and East Asia, and sub Saharan Africa and North Africa.

This is not entirely surprising because the theoretical literature on dual labour markets as well as the literature associated with the emergence/persistence of dualism strongly suggests that there is little or no relationship between growth and informality. Let us examine in brief the theoretical literature in respect of dual labour markets which begins almost at the same time as development economics as a discipline. The two seminal contributions to the theory of dual labour markets, one by Arthur Lewis (1954) and the other by Harris-Todaro (1970) explaining informality continue to have contemporary relevance. What is important is that even they do not argue that it is the pace of growth that matters to emergence and persistence of informality. In both their models, although one is based on classical political economy (Lewis), and the second one more on neo-classical foundations (Harris-Todaro), what matters for our purposes is that their models suggest strongly that it is the pattern of growth that is central for the emergence and persistence of informality.

In an ideal world in the Lewis dual economy model there occurs a shift of unskilled workers from the subsistence sector characterized by unlimited supplies of labour to the capitalist sector. According to Lewis the agriculture sector is the repository of disguised unemployment, but this phenomenon is not restricted to the rural areas. In the model the

limitations of capital and natural resources limits the absorptive capacity of the capitalist sector. This why there is the emergence of disguised unemployment even in urban areas. So in other words not only does informality characterize the subsistence agricultural sector in Lewis's model but it begins to show up even in urban areas in the form of casual jobs - all examples of urban self-employed and of course wage employment in the form of domestic service.

Within the dominant agricultural or subsistence sector for Lewis, like Adam Smith, there is a relatively small non-agricultural commercialized sector as potentially dynamic, led by a landlord class. The problem, however, is that he was much too optimistic about the ability of this landlord class within agriculture to mobilize the hidden rural savings. Lewis's main focus was on the relocation of labour until the turning point is reached: the point when labour migration out of agriculture outstrips population growth long enough for dualism to disappear and the entire economy to become fully capitalist. That never happened in most developing countries, and other forces intervened – as we discuss below.

An extension of the Lewis model can be found in the Harris Todaro model which developed a formal model of labour market dualism. They try and explain why the number of rural to urban migrants markedly exceeds the number of available urban jobs, which results in open urban unemployment. The model hypothesizes that entry level urban wages are above both an agricultural earnings as well as a hypothetical market clearing level. For Harris and Todaro it was politically determined high minimum wage that lead to continual rural-urban migration, in spite of substantial open urban unemployment.

It would be useful to dwell a little on the contemporary relevance of these models that were developed in 1954 and 1970 respectively, since they offer some policy suggestions which governments may be well advised to keep in mind. Theoretical models need to be examined in the light of historical experience of economic development in the Asian region. The experience of the East Asian miracle economies is relevant for all regions because the number of formal jobs created in what were called the newly industrialized countries (Japan, Korea and Taiwan in that order) largely offset the number of rural or urban migrants . The Lewis model provides a useful conceptual framework for addressing the dynamics of formal and informal employment in the East Asian region in this sense.

On another issue, Lewis tended to focus on the demand side for labour but on the supply of labour, specifically the quality of labour as shown in the level of educational attainment of potential workers, Lewis believed that if human capital is not available for development the capitalists or the government will soon provide the facilities for training more skilled people.

Here it is absolutely critical to keep in mind that the East Asian miracle economies and even their Southeast Asian neighbours who followed the “miracle” economies in a flying geese pattern were characterized by significant investment in education early in the development process (Mehrotra and Jolly, 1997). This is important because increasing educational attainment can itself affect the demand side for labour, and also, for example, by attracting foreign direct investment in an Open Economy context.

This East Asian model highlights the contrasting experience of South Asian economies specially India which failed to attract FDI for nearly half a century not only because it remained for four decades a relatively closed economy, but also because of its failure to invest in school education. That said, it is not that Southeast Asian economies managed to eliminate informality, although the East Asians did succeed. Again, it is the pattern of growth that distinguishes the South east Asian economies, not necessarily the pace. The East Asians (excluding China) – who were leaders in the flying geese model – did not rely much on FDI (relatively speaking), while the South east Asian economies who were followers, did invite into them much more FDI, especially from the leaders of the model.

One dimension of this pattern of growth relates to the dualism *within* the informal sector – and draws upon the South east Asian and Latin American experience. In other words the presence of a lower tier as well as upper tier, the latter consisting of voluntary informal employment. In 1990 Maloney developed the idea of dualism within the urban informal sector. Similarly, Fields (2005) found that many informal workers previously worked in formal employment. Based on his research in urban Costa Rica and Malaysia he suggested that upper tier informal employment is voluntary. This literature on the emergence of the voluntary informal employment is derived from the experience in Latin America, specially Argentina, Brazil and particularly Mexico (Perry et al, 2007). In fact one could possibly suggest that there is a generally positive relationship between the ratio of voluntary to involuntary informal employment and the level of GDP. In other words the lower the per capita income of a country the lower the share of voluntary informal employment. Voluntary informal employment/enterprises may not be easy to reverse, once entrenched.

Similarly, drawing upon evidence from to Asian countries, the Philippines and Thailand, Ranis and Stewart (1999) developed a formal model of traditional or stagnant versus modernizing or dynamic components of the informal sector, and also estimate the size of these components. These components seem to be over overlapping with Fields' upper tier and easy entry informal employment. Ranis and Stewart (1999) also emphasize possible production linkages between the modernizing component of the informal sector and the formal sector and it is possible that GDP growth does lead to an increase in the size of the formal sector, which depending upon institutional factors could or may not lead to a rise in the informal sector. Thus for Ranis and Stewart the relative size of the modernizing versus traditional components of the informal sector will depend upon the growth and organisation of the formal sector and economic growth more generally. In the Philippines in the 1980s they find the growth in the traditional and fall in the modernizing components. For Thailand they note an opposite trend and they attribute this difference between the two countries to quite divergent macroeconomic performance in the two countries (Thailand better than the Philippines) on the one hand, and second to the organisation of the formal sector in Thailand that lend itself to the establishment of production linkages with the modernizing component of the informal (see also Mehrotra and Biggeri, 2007 for some evidence for Thailand, the Philippines and Indonesia).

What we learn from Ranis and Stewart is that economic growth can impact the composition of informal employment in the sense that it can affect the relative size and share of the traditional and modern employment. They also suggest that informal employment can not only continue but could possibly rise with economic growth, if there are production linkages between formal and informal enterprises, as there increasingly are in a world comprised of global production networks and global value chains.

Thus both in East and Southeast Asia and Latin America globalisation has had the effect of increasing the production linkages between formal and informal enterprises. This happens through the instrument of subcontracting between such enterprises in global supply chains which could extend from the home based work to the contractor, who could be both informal or a formal, who is exporting from the developing country, all the way to a multinational corporation headquartered in an advanced industrialized country. This is not surprising as the objective of such subcontracting arrangements is to avail of the competitive advantage derived from lower wages, which is an integral part of the labour intensive export oriented industries in both LAC and SE Asia. In both regions, these sectors would be characterized by production by household and largely female labour power.

Globalisation can result in faster economic growth and more jobs but it could very well lead to increasing informal employment (Carr and Chen 2001). Thus globalisation has resulted in increased competition which relies upon lower cost informal workers. This is one way in which globalisation can promote informal employment. A second way in which globalisation can result in increased informal employment is (while contributing to growth through greater foreign direct investment) because short term capital inflows could turn into outflows causing disruptions domestically. Short term capital flows if it reverses can lead to financial crisis which may result in a decline in both informal employment and formal employment in the short run. Thus Lee and Lee (2007) show in a study of Korea that a large increase in non-regular employment, most of it informal, took place in the wake of the late 1990s financial crisis.

One can see from this preceding analysis therefore that the relationship between economic growth and the extent of informality in an economy is rather complex. In other words economic growth can result in an increase in absolute terms of formal employment but at the same time it can also increase in informal employment specially in an Open Economy. In other words one should not look for any strong relationship between economic growth and a consistent rise in formal employment.

That this relationship is complex is demonstrated by the two contrasting cases in Asia of formal employment trends in China on the one hand and India on the other, despite the fact that both have experienced rapid economic growth.

2.1 China

What becomes clear from the China growth, jobs and informality narrative is the following. First, China had a development strategy, which incorporated an employment growth strategy. The outcome of the successful implementation of these two complementary

strategies since economic reforms began is the rise in the share of formal work. But that does not mean that informality was eliminated; far from it, there is plenty of informal employment still present. This clearly suggests two conclusions: one, that a growth strategy that emphasized non-agri growth and enabled the migration of surplus labour out of agriculture is a pre-requisite to success in achieving growing formal work opportunities; and two, that even such a strategy, successfully implemented even though it may have been, may not formalize all enterprises and all workers, even over a quarter century. Let us spell out this narrative.

Majid (2015) shows that in 1990 roughly 10 years after the economic reforms began in China regular employment (which is the Chinese equivalent of formal) as a percentage of total employment stood at 39.55%. It thereafter rose consistently and rapidly to 48.88% by 1995. There after it stagnated all the way to 2005, when it stood at 48.7%. And there after it slowly rose and in 2011 it was 63.97% of total employment.

What is even more important is that in absolute terms *rural* regular employment rose from 117 million in 1990 all the way up to the year 2002 to 200.7 million. It did fall thereafter. However, as the growth rate picked up it did rise sharply all the way up to 2011, when it stood at 214 million. In other words over a period of two decades which had witnessed the fastest growth rate in China's history there was an absolute increase in regular employment even in rural areas, so sharp that it practically doubled over that period. What is equally noticeable is that non regular employment which had been 360 million in 1990 fell consistently over the first decade, falling below 300 million for the first time in 1998, and then fell through the noughties until it dropped below 200 million in the year 2010 and even further to 191 million in 2011.

These rural employment trends and their composition over the two decades of fast economic growth must be understood in the context that total employment in rural areas which was 477 million in 1990 stagnated till about 2002 (475 mn). In other words, while China's non-agricultural output and employment was rising fast through the 1990s, the absolute number of workers in rural areas began to fall only after 2002, after industrial policy's focus on industrial growth sharpened. After that it fell consistently in rural areas to 405 million in 2011. In other words the rapid movement of labour out of agriculture into non agriculture within rural areas as well as a shift to urban areas is the most important characteristic of the structural transformation in China.

The preceding trends in regular employment in rural areas needs to be explained. In 1990 regular rural employment as a percentage of total rural employment stood at only 24.6%. However that rose sharply in 10 years to 40.1% by 2000, rising further to 53% over the next decade in 2011. What we need to appreciate is that TVE employment as a percentage of total rural employment was the driving force behind the rise in regular employment. TVE employment in 1990 was 19.5% in total Rural Employment which doubled to 40% by 2011.

Let us now turn to the trends in *urban* regular employment in China over the same period 1990 to 2011. Total regular employment consisted of work force employed in three different

types of enterprises: traditional formal, emerging formal and individual businesses and small enterprises. The dynamism of the Chinese urban economy is reflected in a sharp decline in traditional formal employment over 1990-2011. This kind of employment comprised over 95% of total regular employment in urban areas in 1990. While much of the 1980s was taken up with reform of the agricultural sector it is hardly surprising that traditional formal employment in urban areas was predominant in 1990. However the 1990s was characterized by rapid industrial reforms, including the growth of the private sector and also increased foreign direct investment. Prior to the economic reforms there was practically no private industrial sector in China.

Not surprisingly emerging formal enterprises accounted for only 1.6 million of the 147 million total regular employment in urban China in 1990. However, that rose consistently throughout the next two decades. Though its growth was quite tepid through most of the 1990s emerging formal enterprises truly exploded after the turn of the millennium, with total employment in such enterprises standing at 71 million in 2011.

A similar phenomenon occurred in respect of individual businesses and small enterprises in urban China over the same two decades. In 1990 such enterprises employed only 6.7 million workers, which rose to about 34 million by 2000. However as industry grew and the size of both FDI as well as private Chinese firms grew, these enterprises saw a tripling of employment in them to 105 million in 2010 and further to 121 million in 2011. That is a remarkable turnaround in the composition of regular employment in urban areas. Over those two decades of growth by 2011 the contribution of formal emerging enterprises has risen to 30% from merely 1% over two decades, while that of individual businesses and small enterprises had grown to 40% (from <5%) of total regular employment in urban areas. Naturally the remaining 30% was accounted for by the traditional formal employment.

The great employment transformation in China was the result of a reasonably well conceptualized strategy of industrialisation with the appropriate sequencing of policies within a planning framework. The three stages in hindsight upon reflection seem to have been as follows: first, the introduction of the household responsibility system in agriculture in the beginning of the eighties, so that an agricultural revolution came first. This is rather like the other East Asian miracle economies which underwent a similar agricultural transformation in the first decade of their development (Korean, Taiwan). The second stage came with a rural industrialisation strategy that was characterized by the growth in TVEs in the 1980s. The third stage came with growth in the modern industrial sectors (Noman, 2015). This stage was characterized by several drivers: one was FDI mainly into special export zones in the late 80s. In the 1990s occurs then the industrial restructuring of state enterprises as well as the conversion of TVE management from collective/state by local governments into genuinely privately owned and managed enterprises.

It is this strategy of employment-intensive industrialization that lies behind the success at formalization (or growth of regular employment), rather than a special or specific effort to formalize. In this regard, China started with an advantage in the sense that most of its

nonagricultural enterprises were state-owned (and hence formal), and they then had to be privatized as formal units. Secondly, China began its reforms without any private non-agricultural enterprises. The latter emerged with the conversion of TVEs into privately managed/owned enterprises, as well as the emergence of new private units ab initio, which were the 'emerging formal' and the 'individual businesses and small enterprises'.

2.2 India: the relationship between institutions, growth and informality

The evidence that emerges from the above analysis is that formal work increases (and informality correspondingly declines) when the growth objective specifically builds an employment objective into the development strategy. That is the lesson that clearly emerges from the China growth story. In other words, what matters is the *pattern of growth*, not growth per se.

This evidence is further strengthened from the following analysis of India's recent growth story. As we all know, India has experienced unprecedented economic growth since the early 1990s. India's GDP growth over the first three decades after independence was a mere 3.5% pa, while population growth over the same period was about 2.5% pa, leaving per capita GDP to grow at a mere 1% pa for 30 years. However, as the demographic dividend set in in the early 1980s, the growth rate rose to 5.4% pa over the 1980s (just as population growth trended downwards) (Mehrotra, 2016). However, it was essentially after the economic reforms of 1991 that GDP growth picked up to 6.4% pa. Thereafter, the growth rate picked up even further: to 8% over 2003-4 to 2013-14, despite a global economic crisis intervening in 2008 and thereafter. Despite a much faster growth rate, there has been practically no change in the rate of informality (as Table 2 shows).

This suggests that while growth can contribute to an increase in absolute terms of formal enterprise and formal work creation, there seems no certainty growth per se will lead to a share rise of formal enterprises or workers. So even though the absolute number of formal jobs may grow over a period of rapid growth, the real issue is whether the formal job growth is fast enough to absorb new entrants into the labour force, thereby raising the share of formal work. If not, then the entrants will have no choice but to work in the informal economy, as mostly casual workers or self-employed/own account workers/unpaid family labour; alternatively, they join the openly unemployed, a luxury that a relatively few can afford.

So why is the share of informal workers in the total workforce so sticky in India, despite the fast pace of GDP growth? There are historical reasons related to the pattern of growth that must be understood. They were the result of factors affecting both the demand and the supply of labour.

Explaining the rise of India's informality: Determinants of the demand for labour

Three kinds of reasons stand out which impacted the demand for labour. The first was the pattern of India's growth. In the Second Five Year Plan (1955-6 to 1959-60) the government

of India and its Planning Commission decided to adopt a import-substituting industrialization strategy, with a focus on heavy-industry first (Chakravarty, 1982; Mehrotra, 1990). In other words, limited domestic savings available in a country at a low-level of development were to be utilized only for investing in heavy industry in the public sector. So it was a state-led capitalism, substituting for the limited number of large corporates (China had almost no private firms till even the 1980s though that changed rapidly from 1990 onwards), who in any case could not be expected to invest in long gestation projects. This could not be, by definition, a strategy for rapid absorption of surplus labour in agriculture. The result was as surplus workers migrated away from agriculture in search of non-agricultural work, they were inevitably absorbed in traditional services in both rural and urban areas. If not, they were absorbed in unorganized manufacturing in micro-enterprises employing less than 10 workers, where no social insurance was available.

So limited was the concern for informality in the labour force, that there is no data prior to 2004 to enable us to estimate the exact share of informal workers in the total workforce; this was not unusual by international standards, whether in other developing countries or in international agencies.³ However, labour force surveys in India always distinguished between three types of workers: regular, casual and self-employed (the first two being wage workers).

A second factor that impacted the demand for labour, which also related to the policy induced pattern of growth, was that the Industrial Policy of the government of India mandated that most manufactured consumer products would be reserved to be produced by small scale industries (SSI). This process began with a few products, but the number of reserved products for the small-scale sector kept growing. until in 1990 it reached 836 products. Medium-sized firms or large corporates were disallowed from entering this sector. This resulted in perverse incentives to remain small, with inevitable loss in terms of economies of scale, primarily because the SSI sector received many benefits from the state – benefits that the enterprise would lose if firm size grew above the government-mandated threshold for ‘smallness’. Another perverse incentive was that large corporates could give birth to small enterprises, to take advantage of the protections that the small-scale industries enjoyed from reservation of products for the small. The small enterprises had no incentive to grow and absorb more workers in their manufacturing units, thus exacerbating a problem resulting from the heavy-industry first strategy of import-substituting industrialization (discussed above). These small firms of sub-optimal size often, would spawn further smaller unorganized units even smaller that could serve as suppliers. Together, the ecosystem that emerged was a network of micro-enterprises that wished to remain below the radar as far the state was concerned.

³ Jacques Charmes” (2000) early efforts to collect data on share of informality in developing countries were very patchy. In ILO’s own efforts to publish *Men and Women in the Informal Economy*, the first two editions only had 27 countries () and 40 countries, many of which were from the developed world. It is only in 2018 that the third edition is able to bring together data on 100 countries, the majority being developing countries.

A third factor impacting absorption of labour in organized manufacturing or services were the plethora of central and state government labour laws. On the one hand, hardly any labour laws were applicable to the small enterprises or informal enterprises. On the other hand, the larger enterprises, whether medium or large, became gradually subject to a number of laws passed by state or central governments, which protected workers in the organized sector. While social insurance (in the form of employee provident fund and state insurance) was mandatory for enterprises in manufacturing employing more than 20 workers, the growing number of laws that required compliance grew if the number of employees grew larger (Bhagwati and Panagariya, 2012). This meant that employers tended to adopt technologies that often limited the number of workers. The number of central labour laws alone amount to 45, which are often inconsistent with each other, and firms need to comply with more and more laws as enterprise size increases. (Even after the repeal of some laws, the number was still 37 in 2018.) On top of these 45, there are state-specific labour laws that organized firms in industry or services have to comply with.

With barely 6000 labour inspectors in India supposed to regulate these multitude of laws, this became a breeding ground for corrupt inspectors engaging in rent-seeking. The reaction of employers was inevitable: the fewer the workers, the better it is from their perspective. Small sized firms that had no incentive to grow and provide jobs, and no requirement to provide social insurance, mushroomed and continued to grow. All produced low quality goods, with low levels of technology, and hence low productivity, low wages and informal contracts. The workers employed were also those with low order skills, and poor education. It was a vicious cycle, spawning informality and reinforcing its persistence.

This enterprise-base was the eco-system that was the source of labour demand in the Indian economy that accounts for such a high share of informality of both informal enterprises and informal employment.

The quality of labour supply as a factor in the rise and persistence of informality

The final factor that resulted in the growth and persistence of informality in India was the education and skill levels of the workforce. We begin by noting that 146 million (or 30%) of the workforce of 485 million in 2012 are illiterate (who are mostly in agriculture). An additional 52 % (or 253 million) of the labour force are those only with education upto secondary level. (But 40% of this 52% have less than middle-level of education.⁴) In other words, barely 3% of the workforce has technical education at tertiary level, and another 7.2% has general academic education at tertiary level.

National Sample Survey (NSS) data allows an analysis of the workforce by three types of employment: self employed, casual labour, or regular salaried work. It is not surprising that hardly any illiterates have regular salaried jobs. Most illiterate are either casual workers or in self employment usually engaged in low productivity work. Over half of the self-employed are own-account workers, as opposed to being employed in micro-enterprises which might

⁴ See chapter 2 in Mehrotra (2014) for a more detailed analysis.

have 2-9 workers. Firms that employ less than 10 workers are defined in Indian official parlance as being in the unorganized sector.

Just over half the workforce has education up to secondary level. But well over half of those who have education upto secondary level are self employed (mostly obviously informal). However what is more worrying is that as many as 75 million of those with secondary education actually are in casual work. Given that nearly half in the work force have secondary education the fact that nearly a third of all those with secondary education are in casual work (without any social insurance) should worry policy makers.

The total number of those with higher secondary education (34.4 million) and those who have graduate level education and above (35.6 million) is roughly similar in the work force. What is notable, however, is that half of those with only higher secondary education are self employed. Under a third of those with higher secondary education are in regular salaried employment (while only 15% of those with secondary education have regular salaried jobs). However half of those with graduate level education or above are in regular salaried employment.

What is notable is that technical education below graduate level as well as at the graduate level and above significantly raises the probability of your getting a regular salary job than if you were a graduate with only general academic education (Mehrotra, 2015).⁵

While there were 351 million males in the total workforce of 485 million in 2012, there were only 134 million women in the workforce. Nearly half of the women in the workforce are illiterate but less than one-third of men in the workforce are illiterate. If women acquire education up to graduate level, whether it is general academic or technical education, there is a high likelihood they will get regular employment. In fact the probability of their getting regular employment is slightly greater with graduate education if we are women rather than if they were men.

Clearly, with a labour force that has relatively poor levels of education, it is not surprising that most of them have been absorbed, if not in informal agriculture, in traditional services, or construction, or unorganized manufacturing. In none of these areas does most employment come with social insurance.

The changes due to Goods and Services Tax (GST)

ILO has historically had 2 definitions: one for informal enterprises (firm-centric) & informal work (worker-centric). India too has the same definitions: the firm-centric one is called organized(>10 workers) for 'formal' (although half of workers in such firms don't have social insurance), unorganized (<10 workers) for informal (national statistical definition of informal enterprises).

⁵ The rate of unemployment of those with graduate general academic education is only slightly lower at 7.3 percent than for those with technical education below or at graduate level (8.8%).

Most organized units will be indirect tax payers; most unorganized units will not be. A indirect tax reform (GST 1 July 2017) is transforming informal sector enterprises into formal – but only to the extent that they now have an incentive to register with the GST authority of the government.

Why is GST a game-changer? The main reason is its provision for input tax credit (ITC). The basic premise is that taxing the same thing twice is not fair. To avoid double taxation on items used as inputs to make other items, credit of taxes paid on inputs can be claimed by the maker of the next item while paying tax on the output. If tax paid on inputs is higher than tax on output, the excess can be claimed as a refund. ITC is also available to traders on goods bought for sale/resale, and since many small traders in the unorganized, informal units purchase goods from formal, organized sector enterprises, they have seen the self-interest in registering with the GST authority.

Till 1 July 2017, input tax credit was available for taxes such as Central Excise duty, VAT (which varied by State), CST (Central Sales Tax) and service tax. But there had been several 'ifs and buts' as to which of the taxes can be set off against each other under the previous regime. GST is important as the integration of 17 different indirect taxes under GST will make life easier for companies to claiming input tax credit.

Second, GST rules for claiming ITC have been tightened to avoid frauds or revenue leakage for government. The buyer cannot get ITC unless the supplier has actually paid the relevant tax or claimed input credit. Without ITC, there is a 'cascading' effect of taxes. Erstwhile unregistered (for tax purposes) firms will now get a tax history, so there is now under the GST potential for access to institutional (as opposed to non-institutional) credit – reducing credit cost.

Why is GST transformative for formality? GST is levied at every step in the production process, but is refunded to all parties in the chain of production other than the final consumer. Goods and services are divided into five tax slabs for collection of tax - 0%, 5%, 12%, 18% and 28% (the last one for luxury, demerit goods). As a result of the introduction of GST, a large increase has occurred in the number of indirect taxpayers; many have voluntarily chosen to be part of GST, especially small enterprises that buy from large enterprises and want to avail themselves of input tax credits. Increase in number of indirect tax payers spells growing formality of erstwhile informal firms. We find that as a result of GST India's formal sector non-farm payroll is substantially greater than currently believed. Formality defined as social security provision yields an estimate of formal sector payroll of 31% of non-agricultural work force; formality defined in terms of being part of the GST net suggests a formal sector payroll of 53% (Ministry of Finance, 2018).

In Dec 2017, there were 9.8 million unique GST registrants, slightly more than total indirect tax registrants under the old system. But the two numbers are not comparable: registrants in the old system were not unique, since many taxpayers were registered under several taxes.

Adjusting the base for double and triple counting, GST increased number of unique indirect taxpayers by >50% - a substantial 3.4 million.

One of many benefits of GST was the voluntary compliance it elicited. About 1.7 mn registrants who were below the threshold limit of Rs 2 mn turnover pa (and hence not obliged to register), actually *chose to do so*. Indeed, out of the total estimated 71 million non-agriculture enterprises, around 13% are registered for GST.

Formality, as we noted above, can be defined in at least two senses. First, when firms are providing social security to employees. In India, government provides this for its employees, and Employees' Provident Fund Organization (EPFO) provides it to private sector employees for pensions and provident funds; and Employees' State Insurance Corporation (ESIC) in respect of medical benefits. EPFO contribution is mandatory for industries employing >20 workers, and whose monthly wage/salary is <Rs. 15,000. Above that level, contributions are voluntary. Jan-June17 registrations jumped between March-July 17 by 10mn because of GST registration of erstwhile informal firms.

A second definition of formality could be when firms are registered for tax purposes. Since new data on the GST is available, one can define tax formality as firms having registered under the GST. Formal non-farm payroll from a *social security perspective is estimated at about 75 MN, or 31% of non-agricultural workforce*. This estimate includes government non-farm payroll (center and states, about 15 mn excluding defence personnel).The formal nonfarm payroll from a *tax definition implies that nearly 53% of the non-agricultural workforce (240 million) is in the formal sector* (Ministry of Finance 2018).⁶

Jobs in organized or unorganized segment enterprises?

Official definition of organized segment enterprises is those non-agricultural units that employ more than 10 workers.

Table 2: Sector-wise distribution of workers by organised-unorganised enterprises and formal-informal employment, 2004-2012 (million)

Sectors	Organized	Unorganized	Total	
	Formal Informal	Formal Informal	Formal	Informal
2004-05				

⁶ Chief Economic Adviser Subramaniam: “The revenue garnered by GST has exceeded all expectations with a tax buoyancy of 1.2 rather than 1 (indirect type taxes normally increase at same rate as nominal GDP.) Remarkable is that GST tax revenue has increased at a rate 20% faster than traditional indirect taxes.. That was in the first 8 months of implementation, when implementation problems were immense” (Ministry of Finance, 2018). Hence the potential is huge!

Agriculture	0.2	4.1	0.1	264.2	0.3	268.2
Manufacturing	5.0	10.3	0.6	38.0	5.6	48.3
Non- Manufacturing	2.0	7.2	0.1	20.1	2.1	27.3
Services	19.5	10.0	1.1	76.8	20.6	86.7
Total	26.7	31.5	1.9	399.0	28.6	430.5
2011-12						
Agriculture	0.5	17.7	0.1	213.6	0.6	231.3
Manufacturing	6.1	14.6	0.4	38.7	6.5	53.3
Non- manufacturing	2.7	19.7	0.3	32.7	2.9	52.3
Services	24.2	16.1	1.2	85.8	25.4	101.9
Total	33.5	68.1	1.9	370.8	35.4	438.9

Source: Authors' estimates based on NSS various Rounds

Since 2000, organized manufacturing employment has consistently increased, albeit slowly, all the way upto 2011-12. There was an important improvement that occurred even in the construction sector. Given the increase in infrastructure (airports, national highways) investment by the public as well as private sector, there has been a sharp rise in organized segment employment in the construction sector of non-manufacturing industry. In fact, in 2011-12, nearly 40 per cent of total construction employment was in the organized segment.

Summarising China-India contrast on the relationship between growth and informality

What seems clear from the preceding discussion is that what works for reducing informality and improving conditions of work is growth in which jobs are being created in the non-agricultural sector – especially at a rate faster than new entrants join the labour force. Both the Chinese and Indian cases demonstrate this phenomenon. IN the China case, there was

clearly an industrial strategy with an in-built employment policy for carefully moving workers out of agriculture, and absorbing them in coastal cities' export-oriented manufacturing and construction-driven growth. In the Indian case, while there was neither industrial strategy nor employment policy, the unprecedented growth rate in India post-2003-4 ensured that workers moved out of agriculture, were absorbed in construction and services (and a limited extent in manufacturing), especially modern services, raising the share of organized sector work, and a corresponding fall in unorganized sector workers (Mehrotra, forthcoming). That did lead to a rising share of regular work (as opposed to self-employment), at rising wages, even though informality of workers did not decline. Informal work did not fall as the share of workers without social insurance in the organized sector rose. However, meanwhile, the introduction of the GST has been a gamechanger.

The point about the importance of GST is that if we recall, at the beginning of this paper, we had discussed the role of carrots versus sticks as the drivers of formality. I wish to emphasise that in what is clearly a very complex labour market in a large democratic country, the GST is clearly a stick (masquerading as a carrot, I would add) that has worked in raising the share of enterprises that have registered with the GST administration, and hence also with the social insurance organizations.

2.3 South-east Asia: the persistence of informality in globally highly integrated economies

We had noted in section 1 that there are three geographically clustered groups of countries in Asia in regard to informality: East Asia, where growth and rising per capita income has resulted in very high levels of formal employment; South Asia, at the other extreme, with very high levels of informality and the lowest levels of per capita income; and the middle group of South east Asian economies, with either high levels of low-middle income or upper-middle countries, with still high and persistent levels of informality, despite the level of income they have achieved. This last group is also characterised by very high levels of trade to GDP ratio (Thailand 123%; Vietnam 188%; Malaysia 132%; the Philippines 76%). In other words, they are highly integrated into the global economy; they were also much more dependent upon FDI flowing into them for their growth, with global value chains-based in each of these countries. The fact that they are part of global production networks, and this is integral to the persistence of informality in their workforce (a conceptual discussion we have already had in section 1).

Indonesia: the relationship between growth and informality

Indonesia has a much larger economy than the other ASEAN countries, and hence has a lower trade to GDP ratio (not different, in recent years due to falling oil prices, from that of China 38% and India 43%). Hence, its trajectory in respect of informality is not that different from that of China or India. The share of agriculture in Indonesia's gross domestic product (GDP) has fallen from 45% in 1970 to a mere 14% in 2014. As in other developing economies, this transformation coincided with urbanization, which in turn—at least initially—resulted in a significant “informalization” of the urban economy. Robust subsequent growth in the

manufacturing and service sectors expanded formal sector employment and eventually worked to reverse this trend up until the Asian crisis. The share of workers with formal jobs grew from 34.7% in 1990 to 44.9% in 1997.

The 1998 financial crisis put a stop to the robust growth of manufacturing and services. In the first years after the crisis, formal sector expansion was halted and by 2003, the share of workers with informal jobs was 42%, almost 3 percentage points lower than it was in 1997. However, with the return of economic growth came a further expansion of the formal sector. During 2003–07, annual GDP growth was 6.3% and the transformation away from agriculture continued. In that period, the formal sector expanded by an average of 1.3 percentage points annually (Roethenburger et al, 2014).

Again as in the case of China and India, here too growth led to structural transformation, and that did lead to growing formalization. But the problem is that even this period of growth plus formalization still left half the workforce as informal. This is consistent with the propositions we suggested earlier. First, like the other South-east Asian economies, Indonesia's trade to GDP ratio has been in the range of 46% to 66% over 2006 and 2016 (falling below the lower level only in 2015-16 due to falling oil prices, a major Indonesian export). It is an internationally integrated economy, and as we argued earlier in this section, this situation is conducive to the persistence of informality. Second, GDP growth might be necessary for growing formality in absolute terms, but does not guarantee a rising share of formal work. (What evidence there is on other measures of an institutional nature for Indonesia that could trigger greater formality is a subject we discuss in the next section.)

3. Carrot or stick: which is a better trigger to formality?

In this section we will examine institutional reforms as instruments to convert informal firms into formal ones. We examine the experience of other Asian countries here: Bangladesh, Pakistan and Sri Lanka in South Asia; and also Vietnam and Indonesia from the South-east Asian region; in addition, we examine the small island Pacific countries. In addition, we examine the institutional reforms (consistent with ILO Recommendation 204) that are all in the nature of 'carrots' rather than 'sticks' in the case of India. We will then summarise the evidence in regard to the stick versus carrot debate.

3.1 The stick works

Bangladesh:

Three-fourth of firms are not registered with the tax authorities in Bangladesh. Starting with de Soto (1989), there has emerged a literature that argues that firms would be willing to formalize but it is too expensive to do so, and regulatory processes and red tape inhibit formalization. This has resulted in a movement towards improving Ease of Doing Business (EODB), and the World Bank has been conducting surveys for about 15 years to measure EODB. In fact World Bank (2013) has shown that 368 regulatory reforms occurred in 149 countries between 2003-2012. World average time to start a business fell from 50 to 30 days,

and its cost fell to a third to prereform cost. However, it did not result in a fall in informality in these countries. This suggests that the Business Entry reforms listed in ILO Recommendation 204 may not be a very effective instrument to trigger greater formality.

Given this evidence De Giorgi, Ploenzke and Rahman ((2015) conducted an experiment (an impact evaluation) to test whether the use of a stick, as opposed to carrots, works in triggering the switch to formality. The test was that informal firms were paid a visit by tax officials who handed over an official letter from the Bangladesh National Tax Authority, requiring them to register with the tax authority within a given time limit. They found that many of those firms that received the letter were later registered, but on firms that did not receive the letter there was no effect although the latter were located in the same market.

The study gives more specificity to these findings. In absolute terms the intervention resulted in a small number of firms to register. But in relative terms the effect is very large: on a base of 0.9% of firms being registered in that market, the intervention led to an extra 2.2% of firms to register with the tax authorities (after waiting 84 days for firms to register). Their second finding is that given that there are firms of different sizes in any informal market, they found that only larger revenue firms registered (this result was statistically significant).

Thus this Bangladesh example suggests that instead of trying to formalize all the informal enterprises, the government should better focus their attention on the larger units. The biggest takeaway from this research is that sticks work as a trigger in formalizing informal firms.⁷

Pakistan: tax farming as a stick works in raising tax revenues

The Pakistan case is not exactly one of informal firms turning formal, but of the impact on property taxes collected by the government where a “stick” instrument is used on property owners. Since the switch from informality to formality is normally accompanied by tax revenues of the government rising after firms register with a designated government agency, this case clearly has implications for our research. Khan, Khwaja and Olken (2014) conducted a randomized control trial in the Punjab, Pakistan provincial government. They randomly allocated tax officials in the entire provincial urban property tax department, which consists of 482 property tax units (known as circles), into one of three versions of performance-based pay schemes or a control group. A total of 218 circles, consisting of about 550 tax personnel, were randomly allocated to one of the three treatment groups, for two fiscal years. The incentives were large: the three-person tax team in each treated circle was collectively given an average of 30 percent of all tax revenues it collected above a historically-predicted

⁷ De Andrade, Bruhn and McKenzie (2013) in a similar study examine the effect of stricter enforcement on formalization. In an experiment in Brazil, they evaluate the effectiveness of providing information about registration, combining information with paying registration costs, threatening firms with an enforcement visit from a municipal inspector, and threatening neighboring firms with an inspection. They find that enforcement increases the likelihood of registration, but the other treatments did not have any impact. In addition, they find that there is no effect on a firm’s registration by a neighbouring firm being inspected. “These findings suggest that sticks rather than carrots may be more effective at getting firms to formalize” (p. 2).

benchmark.⁸⁹ Many personnel in treated areas were able to double their baseline salaries or more through these incentives.

The three schemes varied in several respects: the extent to which the intervention based performance pay explicitly on non-revenue outcomes and the extent to which they allowed for subjective evaluation on the part of the tax department. The “Revenue” scheme provided incentives based solely on revenue collected above a benchmark predicted from historical data. A second type of intervention, the “Revenue Plus” scheme, provided incentives exactly as in the Revenue scheme, but made adjustments (plus/minus three fourths of baseline salary) based on whether the circle ranked in the top, middle, or bottom third of circles in terms of taxpayer satisfaction and accuracy of tax assessments, as determined by an independent survey of taxpayers. The third scheme, “Flexible Bonus,” took this a step further by both rewarding collectors for a much wider set of pre-specified criteria decided by the tax department, and by allowing for subjective adjustments based on period-end overall performance.

The researchers find that, on average across the three schemes, by the end of the two years performance pay led to an increase in tax revenue of about 9.3 log points based on the administrative data. This translates to a 46 percent higher growth rate in revenues compared to control areas. They show that this came predominantly through an increase in the reported tax base (i.e. the total assessed value of properties) rather than through increased recovery or changes in exemptions granted.

Comparing the three schemes, they found that there are substantial differences in terms of their impact on revenue, with relatively small differences on taxpayer satisfaction and perception of the tax department. Specifically, the Revenue scheme, which provided incentives purely based on revenue collected, showed 15.2 log points higher current-year revenues relative to controls (57 percent higher growth rate) by the second year. In comparison the Revenue Plus scheme achieved only 8.1 log points, and the Flexible Bonus scheme only a statistically insignificant 3.5 log point increase in current-year revenue.

The implication for the formality discussion we would draw from the above is that there is a role here for labour *or* tax officials who are currently only focused on small enterprises that are currently formal (while perhaps extracting bribes from the informal ones). If performance pay for them were to be linked to currently informal firms registering with the tax authorities there is a possibility that the number of registrant firms could also increase. However, to prevent tax officials using this measure as an encouragement to harassment of microentrepreneurs, the design of the scheme will be critical – as demonstrated by the three different variants used in Pakistan.

E-governance as a stick to improve regulation

⁸ The team of three tax personnel in each circle (an “inspector”, “constable”, and “clerk”) together received either ⁹ percent, 30 percent, or 40 percent of all revenues collected above a benchmark. For equity reasons the percentage

Every developing country in Asia is likely to suffer from the problem that it has too few labour inspectors, while the number of laws to be implemented is large. (India, e.g., is a classic case with 35 *federal* laws and probably nearly 150 state government laws, but only around 6000 inspectors to implement them!) Hence, there is an independent case for greater reliance on e-governance instruments as an instrument to encourage formalization.

Sri Lanka: Sri Lanka has developed the Labour Inspection System Application (LISA), a tablet-based labour inspection support system to improve compliance. Inspectors take pictures using their tablets when they find a problem in the workplace, write their reports immediately, and upload them (Chacaltana et al, 2018). This is in contrast to the 10 forms plus record book that they would lug around. In addition, complaints by workers or employers are placed on the LISA database, and the complaint reaches labour officers online. This has made monitoring and follow up easier. By accessing the name of the worker or employer into LISA, a person can see the complaint, court orders, and action taken or not by the labour officer.

The difficulty here is that inspectors can report about already formal firms, but need not even bother to enter informal firms. So clearly, this form of 'stick' is not the appropriate stick.

Bangladesh: Chacaltana et al (2018) report a Digital Labour Inspection Management Application (LIMA) in Bangladesh have developed to improve the collection and analysis of labour inspection data. LIMA portal reports that it can be used by factory management to get layout plan approval, licence, renewal of licence, and submit annual reports for their establishments.

While this is a fine improvement, it would be applicable only if a unit is visited by a labour inspector. In other words, it would apply in the case of a formal firm, and almost never in the case of an informal firm. So its utility in ensuring better regulation of informal firms would be next to useless.

In summary, we would argue on the basis of this somewhat limited evidence that sticks do work as an instrument of formalization. Many governments have spent much of the past decade trying to extend a helping hand to informal businesses by making it easier and cheaper for them to formalize. Much less effort has been devoted to raising the costs of remaining informal, through increasing enforcement of existing regulations. The above cases suggest that there is a strong case for using the stick. However, we should also make a case for further research to reinforce this evidence that we managed to collect.

3.2 The evidence on the use of carrots as an instrument of formalization

Most government support programmes for the informal economy target individuals rather than firms. This does not encourage informal firms to formalize and thereby benefit from support programmes (de Paula and Scheinkman 2007). However, informal firms are more likely to register as formal firms if the benefits of formalization such as tax incentives, soft loans and government support for human resource development and technology are greater than the costs (e.g. registration fees, other payments during the registration process).

Coolidge and Ilic (2009) agree and argue that one of the most important reasons why firms formalize is to gain better access to government services. Therefore, early exposure to some forms of government support, coupled with anecdotal evidence from other firms that have received such support, may strengthen the resolve of firms to formalize. In other words, the structural distribution of attention is most important in the effect of government support on the probability of formalization. Engaging firms in the structural institutions of the formalized economy shifts their attention from the benefits of being informal to the costs of not being formalized (Prahalad 2004). Eventually, as Hansen, Rand, and Tarp (2009) find, firms that receive government financial support have higher growth rates than non-receivers. The effect of such a change may take time to show results.

Vietnam

Nguyen, Verreyne and Steen (2014) study the drivers of firm formalization in Vietnam. This research uses data from the 'Small and Medium Scale Enterprise Survey in Vietnam' conducted in 2005, 2007, 2009 and 2011. The four surveys covered around 2600 manufacturing firms in three cities in each of the four years, namely Ho Chi Minh City, Hanoi, Haiphong and seven rural provinces, namely Nghe An, Long An, Ha` Ta`y, Quang Nam, Phu Tho, Khanh Hoa and Lam Dong. In each survey, a stratified sampling method was employed to ensure representativeness across all types of enterprises. Therefore, the sample from the four surveys included both firms operating under Enterprise Law and Cooperative Law (Nguyen 2003, 2005), which are considered as formalized firms, and household firms that do not operate under these laws (Nguyen 2003, 2005), which are considered to be informal firms.

Nguyen et al (2014) used data from the four surveys of Vietnamese firms to understand why informal firms transition in formalized firms. The results showed that this transition process benefits from government-supported finance. Such support encourages firms to enter the formalized economy rather than face the costs associated with remaining informal. In other words, government-financed support for businesses to transition to formalization can lead to two positive outcomes: first, in removing any growth constraints of individual businesses; and, second, in enforcing the property rights of these businesses when they register and so gain the full benefits of accessing credit and skilled labour. Added to these positives can be that corruption in the economy reduces as participation in the formalized economy increases when those yet to transition acknowledge that the cost of being informal is greater than the cost of being formal. These formalization benefits are subjectively evaluated by business owners.

Unlike other examples, such as de Soto's (1989) Peru data where the costs of being in the formalized economy were persistently high, reforms in Vietnam during the survey period lowered the cost of operating in the formalized economy (World Bank 2014). This would explain the difference between the findings of Nguyen et al and those of Rand and Tarp (2012) who used 2005 cross-sectional data and found that firms remained informal to hide from the costs of the formalized economy.

Nguyen et al's (2014) results supported the proposed relationship between government support and formalization in that government support for informal firms makes them more likely to formalize as structural attention drives decision-makers to consider the costs of informality and the benefits of operating in the formalized economy. Structural attention, the study claims, is enacted through a network of distributed actors in the broader economy and the institutions of the public sector. Consequently, informal firms are motivated to formalize to achieve higher growth. While Vietnamese firms can access support through investment incentives, tax exemptions or reductions, or soft loans from the Vietnam Development Bank or Vietnam Bank for Social Policy, only formalized firms can apply for investment incentives, tax exemptions or reductions. In contrast, informal firms could access only a small number of soft loans from the Vietnam Development Bank or the Vietnam Bank for Social Policy that focus on poverty alleviation rather than business development.

Indonesia

Rothenburg et al (2014) evaluate the impact of Indonesia's one-stop-shops for business registration program, a large-scale program that attempted to reduce registration costs. They find both that the program had no effects on firms' informality rates, and they also find that it did not reduce the probability that workers were informally employed. What this clearly suggests is that the ILO Recommendation 204 recommendations – which are all in the nature of carrots (rather than sticks) – don't seem to work. Earlier evidence also seems to suggest the same. Informal firms in Indonesia tend to be different from formal firms in important ways, from size, to employee wages and low labor productivity, to limited market reach. These characteristics are not consistent with the idea that the registration costs are preventing firms who would otherwise be formal from making that transition.

Even if many firms are not formalizing because of strategic reasons, it is still desirable to minimize business registration costs. Firms that are growth-oriented and want to formalize will benefit from lower registration costs, making them more efficient and potentially supporting more rapid growth. In addition, lower registration costs may encourage firms at the margins of formality to register.

Sri Lanka: De Mel, McKenzie and Woodruff (WB 5991) conducted a field experiment in Sri Lanka that provided incentives for informal firms to formalize. Offering only information about the registration process and reimbursement for direct registration costs had no impact on formalization. *Adding payments equivalent to one-half to one month's profits for the median firm led to registration of around one-fifth of firms. A larger payment equivalent to two months' median profits induced half the firms to register.* The main reasons for not formalizing when offered incentives included issues related to ownership of land and concerns about facing labor taxes in the future. They also found that the degree of bureaucracy in the registration process also seems to matter for those with the incentive to register, with response to the incentives higher in Colombo, where the registration process was easier, than in Kandy

There is other recent experimental evidence on the effectiveness of programs to reduce registration costs. In a field experiment in Sri Lanka, de Mel et al. (2013) randomly alter the information costs and increase the monetary benefits of formalizing for firms. Their main finding is that providing information about how to register and paying firms' registration costs was not sufficient to induce firms to register. *To cause firms to register, firms needed to be provided with substantial monetary compensation, in addition to covering the direct costs of registration.* In another field experiment in Bangladesh, De Giorgi and Rahman (2013) randomize the provision of an information campaign to groups of firms in an effort to reduce registration costs. They find that treated firms became more aware of the business registration procedures, but the program itself had no impact on actual registration.

India

The government is encouraging formalization through incentives. Historically, evasion of Employees Provident Fund (EPF) by employers is widespread, given poor enforcement of labour laws. The present government, in its efforts to formalise employment, has incentivised employers to enrol workers under EPF by offering to make employers' contribution to the social security scheme for three years, thus boosting enrolment.

Maharashtra state (in western India), for instance, as an additional labour welfare measure, has widened the ambit of EPF to include all power-loom workers (irrespective of the size of the enterprise), boosting formal sector employment. Such measures, however temporary, may enlarge the formal sector size. Since Sept 2017 EPFO registration data been released monthly: half a million new registration means as many formal jobs every month (not new jobs) – a big difference to overall well-being of those workers who have been registered.

Public procurement and MSME: The MSME Development Act 2006 – specified M-S-M thresholds by size of capital investment. The government gives a preference in procuring on government tenders. The Public Procurement Policy 2012 states that Central Govt shall procure a minimum of 20% of their total annual value of goods/services from MSEs (mandatory => April 2015). In the quota of 20 percent of annual procurement, 4 percent is earmarked for the Scheduled Tribes and Caste-owned MSEs, and a procuring entity has to report procurement compliances in its annual report. An MSE quoting price within the price band of L1+15 percent will be allowed to supply by bringing down its price to L1 (lowest bidder) price.

Access to inclusive financial services. In 2013 the share of India's urban population that had a bank account was 55%; in rural population it was 45%. By 2017 310 mn new bank accounts opened; despite duplication (one person holding >1 ac), this ensured all 220 mn households of India had at least one bank acc – all rural/urban households. In principle, they had an overdraft facility of Rs 5000 – so credit was available to individuals. (But very few took overdraft, since their incomes did not give them the confidence they will be able to repay). However, since majority of accounts are in public sector banks, they were given access to personal loans (noncollateralised): MUDRA individual loans for consumption/productive

uses. However, the average size of loan was Rs 17000 (\$250) in 2105-16, rose to Rs 47000 in 2016-17 – but that is not enough to conduct a real business.¹⁰

Access to skills and business development services. Skill development programs are available to all – regardless of aspiration for formal or informal employment. But the real bottleneck is poverty creates two constraints for potential trainees on accessing formal skill development: 1. financial cost of training; 2. opportunity cost of not being in the labour market.

Hence, majority of school drop outs join informal work, becoming informal apprentices – acquiring on-the-job training (often without even stipend). Those who acquire formal TVET, usually join short-term training, but the wage premium of short term training is small. So while ILO Recommendation 2014 recommends skill development as a means of triggering formalization, there is little evidence that this has actually occurred (Mehrotra, 2018b).

E-governance as a carrot to ease transactions for formal and informal enterprises: but does it encourage formalization in Asia?

All governments in the Asian region, regardless of level of development, have adopted the path of e-governance across the board in B2G transactions, and also encouraged them in B2B ones. Whether these measures lead to formalization of enterprises is quite another question; there is no clear evidence that it does or even would, in the absence of other carrots or sticks. Most of these actions clearly seem inspired by the desire to improve Ease of Doing Business, for all firms, formal or informal, rather than an intention to formalize firms. Of course, if it leads to a trail of the transactions which can be tracked by tax authorities, it may lead to some formalization. But the latter ability of the state is dependent upon the ability to mine the cashless transactions data, and utilize it to track down individuals and firms to bring them into the tax net. But the very high share of informal enterprises in Asia precludes the state having the human resources in its tax administration to mine this data, and then wield the stick to draw them into the formal enterprise net.

Cash transaction volumes on a global level seem to be increasing in absolute terms, while at the same time, electronic payment transaction volumes are increasing even faster. This results in a diminished share of cash in the total payment mix. Even though cash is still paramount across Asia, growth rates for electronic payments, both in infrastructure and transaction volumes, are impressive. Card transaction volumes are soaring, as are mobile

¹⁰ Another action with potential effects on formalization was demonetization of high denomination currency notes that accounted for 86% of currency in circulation in the Indian economy. Demonetization of largest denomination Rs 500/1000 notes on 8 Nov 16 was announced by the government. Cash is preferred means for ‘transactions demand for money’ in informalized economy. So the goal apparently was to reduce cash holdings – reduce corruption, widen direct tax net, less cash; in other words, increase formality ! However, there was a devastating impact on informal economy/workers, an effect that has lasted till now; in fact, this effect was less effect on organized sector, more on unorganized units/workers. Workers with bank A/Cs began to be paid by cheque – **so some very limited formalization** followed.

(wallet) payment solutions such as WeChat and AliPay. Asia is very diverse, with some countries depending almost solely on cash while others, like South Korea, are leading the way in becoming more and more cash independent (Global Cash Report, 2018).

Bhattarai (2018) builds an inventory of experiences in applications of technology that could aid the transition to formality in Asia/Pacific. Chacaltana, Leung and Lee (2018) also do the same, but globally. News reports show that Indonesia is encouraging both opening of bank accounts (although only half the population actually has one) as well as many platforms for e-payments between companies and individuals have flourished. The Philippines central bank has also encouraged informal firms to pay salaries into bank accounts, rather than in cash. Whether such developments, welcome as they are, lead to formalization is quite another question. Our meta-analysis of their painstaking work yields the following findings.

What both studies report is that there are two areas where Asian governments have acted to encourage some movement of informal firms towards formality. The two forms are: registration of business being made easier, and the registration, filing and payment of taxes being made easier. While these are important enough interventions to improve the work effectiveness of

the labour officials, there is no reason to believe that these actions will *incentivise* informal, unregistered enterprises to register themselves and become formal. The case studies we presented in this section reinforce this conclusion.

Summarising: There does not seem to be conclusive evidence from Asia in respect of the use of Recommendation 204 type measures to trigger formalization. We found suggestive evidence that ‘sticks’ work better, but more evidence needs to be collected in this regard. There was very little evidence from Asia that ‘carrot’ type interventions work at all in workers acquiring social insurance, or firms becoming registered, paying taxes and registering their workers under social insurance programmes. Jessen and Kluge (2014) compiled a meta-database of impact evaluations for 12 countries (2 of which are Asian, but rest mostly Latin American). They examined four ‘carrot’ type interventions – information provision, simplification/registration, tax incentive, financial incentive – and one ‘stick’ type, labour inspection. It is notable that they conclude that financial incentive (the third and fourth ones among the carrots) have a somewhat smaller probability of displaying “a positive significant impact, but this finding is tentative and not conclusive”. We also found similar indications from our meta analysis in this section.

4. Social insurance and informality

The form of informality that is most important to workers in informal firms is the absence of social insurance. Jessen and Kluge (2014) find that estimates on the outcome “formal jobs/labour registration” have a much higher probability of a positive and significant impact on formality in the 12 country impact evaluations they study than estimates on the other outcomes, in particular the second main outcome considered in the evaluations, “firm registration”.

I would argue that social insurance, and worker informality can be much more easily achieved, than firm registration. This is because, even if firms remain in the informal sector, it is possible for the state to register the workers. Once registered, the workers could be provided social insurance on the basis of small worker contributions, and more importantly, state contributions to the premium of social insurance funds.

This is precisely the route to formality that India is moving towards. Fifteen laws relating to social insurance have been consolidated into one Code (which, at the time of writing is still in draft form). The objective is to incrementally provide SI for all workers who are informal – whether in organized or unorganized sector. The objective is to start with a top-down+bottom-up approach: the poor informal workers will be covered with premiums paid by the government. The top 8% of the workforce (in terms of wage distribution) are already covered by social insurance; coverage of others at the top end of the wage-income distribution is now growing under influence of GST. Those in-between will need to be covered in time, with regular employment growing. In other words, if the EPFO Act in India was to be amended by enabling EPFO registration of informal workers that are working in GST registered firm, then an increasing share of workers will get receive social insurance, and thus become formal workers. The poorest, self-employed and own-account farmers and urban workers can be provided social insurance with the state paying for their premiums to cover old age pension, death/disability insurance, and maternity benefit. The government of India had asked me to estimate the cost of providing social insurance for all unorganized workers for the government, since it is likely that the cost for the poorest workers will have to be borne by governments (both central and states). I estimated that the annual cost to government is reasonable, and affordable without causing a sharp upswing in the fiscal deficit.

This approach could be adopted by other emerging market economies, and thus even though the registration of firms may still take long, social insurance for currently informal workers can be provided much more rapidly.

In Thailand, this approach is already being adopted. The Labour Ministry of Thailand hopes to cover an additional one million informal-sector workers as voluntarily-insured people for social security payments starting in 2019. So far this year, more than 300,000 informal-sector workers – such as taxi drivers, motorcyclists and those working from home – have entered the system, taking the total number of voluntarily-insured people to 2.5 million. Thailand has 21 million informal-sector workers. Thailand has a total of 15 million insured people under the social insurance system. The *Thailand Homeworkers Protection Act* was adopted in September 2010 and constitutes a milestone in terms of extension of labour protection and formalization of the homework sector, that involves around 2 million workers in Thailand.

The Act defines 'Homework' to mean work assigned by a hirer in an industrial enterprise to home workers to be produced or assembled outside of the workplace of hirer or other works specified by the ministerial regulations. A 'Homeworker' means a person or group of persons who agree with a hirer to accept work, which is to be carried out at home. 'Hirer' means an

entrepreneur who either directly or through an agent or acting as a sub-contractor, agrees to employ a homemaker to carry out home work. The act recognizes rights and duties of both Hirer and homeworkers, remuneration standards, working conditions, labour inspection guidelines and penalty provisions. It also established a Homework Protection Committee.

Vietnam is another interesting case that offers evidence regarding the impact on formality of subsidies by the state. These emphasize the power of contribution subsidies. In the health insurance sector subsidies have been crucial in reaching the high levels of coverages we see prevailing in Vietnam now. These subsidies - which amount to almost 100% of contribution in most cases - are unique.

However, in the case of subsidies for the voluntary social insurance regime, subsidies range from 10, 20 to 30% of the contribution rate applied to the minimum wage (so that's 10% of 26% of VND700,000), which is almost insignificant. ILO Vietnam's recent analysis shows it has had no significant impact on the affordability of participation, or indeed on the incentive to register (in the past 10 years, this policy has barely managed to cover 300,000 workers or less than 1% of workers). The National Assembly is currently debating raising these subsidies to 30, 40 and 50%, but ILO suggests this would also have minimum impacts (personal communication with ILO Vietnam). Even after receiving this subsidy, they find that some 40% of currently uninsured workers could still not afford to participate in the system without suffering an income loss that would push them near or down the poverty line. The "tipping point" to see an effect seems to be as high as 90% (or in other words, what the health insurance system did). Thus, it would be important to be clear how a system of subsidies should be implemented. The current system of the SI subsidy regime has been less than successful.

Lee and Torm (2017) investigate how social security provision – a key determinant of formality – impacts on small and medium-sized firm performance in Viet Nam. Based on enterprise census data covering all registered firms from 2006 to 2011, the authors find that firms which increase their social security coverage by 10 per cent experience a revenue gain of 1.4–2.0 per cent per worker and a profit gain of up to 1.8 per cent, depending on the survival time of the firm. However, given the time lag between “investment” (in social security contributions) and returns (enhanced firm performance), specific policy measures such as initial social insurance subsidies for small firms could increase participation in mandatory schemes.

Given these positive developments in both South Asian and South-east Asian nations, this form of formalization of workers, through the provision of social insurance, can transform the landscape of informality among workers across the region – in a region that has among the highest informality among workers for any region of the world (outside Sub-saharan Africa).

5. Conclusions

The following conclusions can be drawn from the preceding review of the literature.

First, Growth can but may not lead to formalization. Of all regions of the world, the developing market economies of East Asian and South east Asia, and even South Asia have experienced regular growth over reasonably long periods of time (quite unlike Latin America, Sub Saharan Africa), with falling population growth rates. They have also followed a planning framework, and planning institutions still survive in almost each country. They adopted an industrial policy, and an education/skills strategy aligned to the industrial policy. Between these two strategies, they managed open economies, with high shares of export (and import) to GDP, which absorbed surplus agricultural labour with fast GDP growth. These countries also have among the lowest poverty ratios for most developing countries.

Despite this success with growth, human development and income-poverty reduction, East Asia (including China) still have high levels of informality. Even excluding agriculture, 51% of males are informal and 46% of females are too. Excluding China, the share drops to less than half in East Asia (but that is because the remaining countries in East Asia are all high-income countries). In South east Asia, the share of informal employment (excluding agriculture) for males is even higher at 65% (females 63%). South Asia too has experienced very rapid GDP growth, but share of males working informally is as high as 77.6% (females 77%).

So growth in the Asian experience certainly has been associated with formal employment growth, but informality not only survives but has remained entrenched.

Second, managing the pattern of growth is very important if informality is to decline. Institutions that past policies have entrenched generate a certain path dependence for the pattern of growth. Despite fast growth and increasing openness of the economy (e.g. India's export to GDP ratio rose from 11% to 25% between the economic reforms of 1991 and 2018), the share of formal workers has barely fallen at all in India. However, many other positive developments occurred in India's labour market. But institutions like the reservations of products for small enterprises (an article of faith of India's distorted industrial policy till 2005), labour laws that have not kept with the times, lack of educational or skill investments, all have entrenched a huge informal sector in India. And India's extremely large informal sector is the reason for Asia having the highest share of informal workers in the world, outside of Africa and the Middle East. Most of South Asia has similar problems. South Asian countries have all been growing much faster than before, population growth rates have fallen sharply in Bangladesh, Sri Lanka, India, and if they wish to reduce formality, their policy makers will need to manage the pattern of growth, especially the employment elasticity of growth much better than before if they are to repeat the East and South east Asian experience of falling poverty.

Third, in such a difficult economic environment, "sticks work possibly better than carrots" in triggering the transition from informal to formal firms. We gave examples from Bangladesh (tax inspector visits), Pakistan (incentives to tax officials), and most importantly India's Goods and Services Tax (since July 2017). More evidence about sticks need to collected.

Fourth, big carrots work better than small carrots, and neutral ILO Rec 204 type measures are not very not effective, even though they may be desirable in their own right. We examined

evidence from several Asian countries, but none of the literature examined indicated that carrots work in triggering formality, though in one case (Sri Lanka) there was evidence that bigger carrots work well in triggering formality.

Fifth, the formality of workers through social insurance can be achieved easily. What is surprising is that more Asian countries, or for that matter other emerging economies have not attempted this measure. Most emerging economies, especially in the low-middle income category and certainly the upper-middle income countries, have the fiscal resources to fully finance social insurance for poor informal sector workers, and part-finance the premium for non-poor informal workers (as Vietnam, Thailand and India are beginning to demonstrate). The latter have income levels that would allow them to contribute out of pocket in such countries, and if the employers were to be registered even the employers could be incentivised to contribute towards the social insurance fund of informal workers (especially the regular workers). For the self-employed poor and the casual wage workers, the state will need to bear the burden.¹¹ India has universalized maternity benefits for poor women, and old age pensions and death/disability coverage of the poor unorganized sector workers is growing.

Finally, E-formality measures are useful carrots - good and desirable in any case, but they are likely to work when used in combination with other measures to trigger formality. In fact, we found limited evidence that such measures have encouraged informal firms to become formal.

¹¹ Thus, my estimate for India, to pay for 22% of the workforce (which was poor in 2012), would amount to only 0.38% of GDP annually (at 2012-13 prices), see Mehrotra (2016).

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