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Myanmar One Pager Business Census 2013-2014

First General Report

Abbreviation and Acronyms

DICA   Directorate of Investment and Company Administration
DISI   Directorate of Industrial Supervison and Inspection
MIC   Myanmar Investment Commission
MMK   Myanmar Kyats
MNPED   Ministry of National Planning and Economic Development
MSIC   Myanmar Standard Industrial Classification
NPT   Nay Pyi Taw
OPBC   One Pager Business Census
SSID   Small Scale Industrial Department
TOT   Training on Trainers
UNDP   United Nations Development Program

Content

Photo Credit: Maung Ne Lynn Aung

Myanmar Business Census 2014: First preliminary report

Objectives of the Census

The One Pager Business Census is the first step in the process of development a sound system of national accounts according international standards.

The business census, as a listing of all the incorporated establishments operating in Myanmar, provides the sampling framework for future, more in depth and meticulous studies on this sector of the economy, the so called registered one or formal sector, depending on the various considerations and conceptual frameworks.

Having this census, will be easier to target in a representative sample of firms, according sectors of the economy, size either measured in terms of employment, sales or capital stock, as well State and Region where they operate. In this way, further questions on the productive characteristics of the firms can be answered. Topics such as industrial organization, origin of the inputs and intermediate goods, energy consumption, skills of workers, can be added to the destination of the production, value added generated and others, in order to construct one of the key inputs for the development of the system of national accounts: the supply and use tables.

The survey will complement the household survey, in the identification of the "unincorporated sector" or the informal sector of the economy, to have the national aggregates that will produce the most relevant information on incomes and its sources, consumption and its pattern, investment and its origin, government expenditures and its financing, as well the foreign trade, in terms of exports and imports. These information transcends the mere academic analysis, to constitute a cornerstone of the process of planning policies, plans and programs in a rational way. This is with baselines and benchmarks that will allow the monitoring, revision and redefinition of public actions, with transparency.

The development of a sound statistical system is a process that requires, above and beyond the political will and economic resources, time of uninterrupted work to build a strong knowledge base. The sooner the country starts with this task, the sooner its benefits can be appropriated.

Methodological Aspects

The "One Pager Business Census" (OPBC) of Myanmar is the first attempt to consolidate and enumerate the registered enterprises that operate in the country.

The framework for the census was provided by the four registries:

1) Directorate of Investment and Company Administration, DICA (12784 firms)
2) Myanmar Investment Commission, MIC (41 firms)
3) Small Scale Industrial Department, SSID (12576 firms)
4) Directorate of Industrial Supervision and Inspection, DISI (32199 firms)

Under the DICA system registration needs to be renewed every two years, therefore DICA listing included the registration period 2011-2012 and 2012-13. The other 3 listings included all registered firms, and those with renewed or non-renewed registrations. These 3 departments did not update and follow up to renew the firms' registration.

The records had some level of duplication, but in principle they should comprise all the firms of the so called "incorporated business sector"[1].

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[1] Incorporation (inc.) is an entity that is recognized and registered according the legal and administrative requirements that may vary according nations and periods of time. In many countries the process of registration or "incorporation" is a basic requirement for the functioning. In Myanmar this is somehow loose for smaller businesses.

Operational mechanism

Although based on administrative records, this enumeration is considered the vast proportion of the registered firms following a multiple criteria, to expand the coverage.

Perhaps the most comprehensive type of business census would be the spatial scanning to find economic activities, but this would be a very costly and time consuming activity. After the population and household census is completed, a better framework for an economic census will be found.

The OPBC privileged simplicity of enumeration and recording, with just a limited number of variables. A detailed business survey is planned for the future for which the OPBC will provide the sampling framework.

The OPBC was designed and coordinated by UNDP and conducted by the Department of Planning field personnel who were trained and supported by UNDP.

Data entry was done at the local level, with a process of double entry in order to achieve high level of quality assurance. A subsequent sampling of the data and analysis of the original forms was carried out at UNDP to minimise errors.

Timetable of the OPBC

The activities developed according to the following time table
1) Data collection TOT Training at NPT: 12-14 Nov 2013
2) Data entry TOT Training at NPT: 15-16 Nov 2013
3) Data collection Multiplier Training at District: 5-6 Dec 2013
4) Data entry Multiplier Training at State and Region: 5-6 Dec 2013
5) Field data collection at Township: 9-20 Dec 2013
6) Data Validation at State and Region: 23-24 Dec 2013
7) Data Entry at State and Region: 23 Dec 2013 - 16 Jan 2014
8) Data set was received after   21-25 Jan 2014
9) Quality control and return for validation   24 Jan - 05 Feb 2014
10) Data processing and Analysis   10 Feb - 31 March 2014

Some general considerations on the OPBC

Due to operational costs a coverage criteria was defined according to the number of firms registered in the four records.

- Those townships with firms registered at the Myanmar Investment Commission were fully covered.
- Those townships that had at least 2 or more registered firms at the DICA
- Townships with more than 10 firms registered at DISI
- Townships with more than 100 firms registered at the small scale records

The spatial coverage of the census reached 179 townships where most of the registered firms are operating (see map 1).

Spatial coverage of the census

Map of Registered Economic Census Implementation Townships
by UNDP and Planning Department in 2013

Legend

Census Implementation Township

☐ Data was not collected Township

▨ Data was collected Township(total 179 Townships)
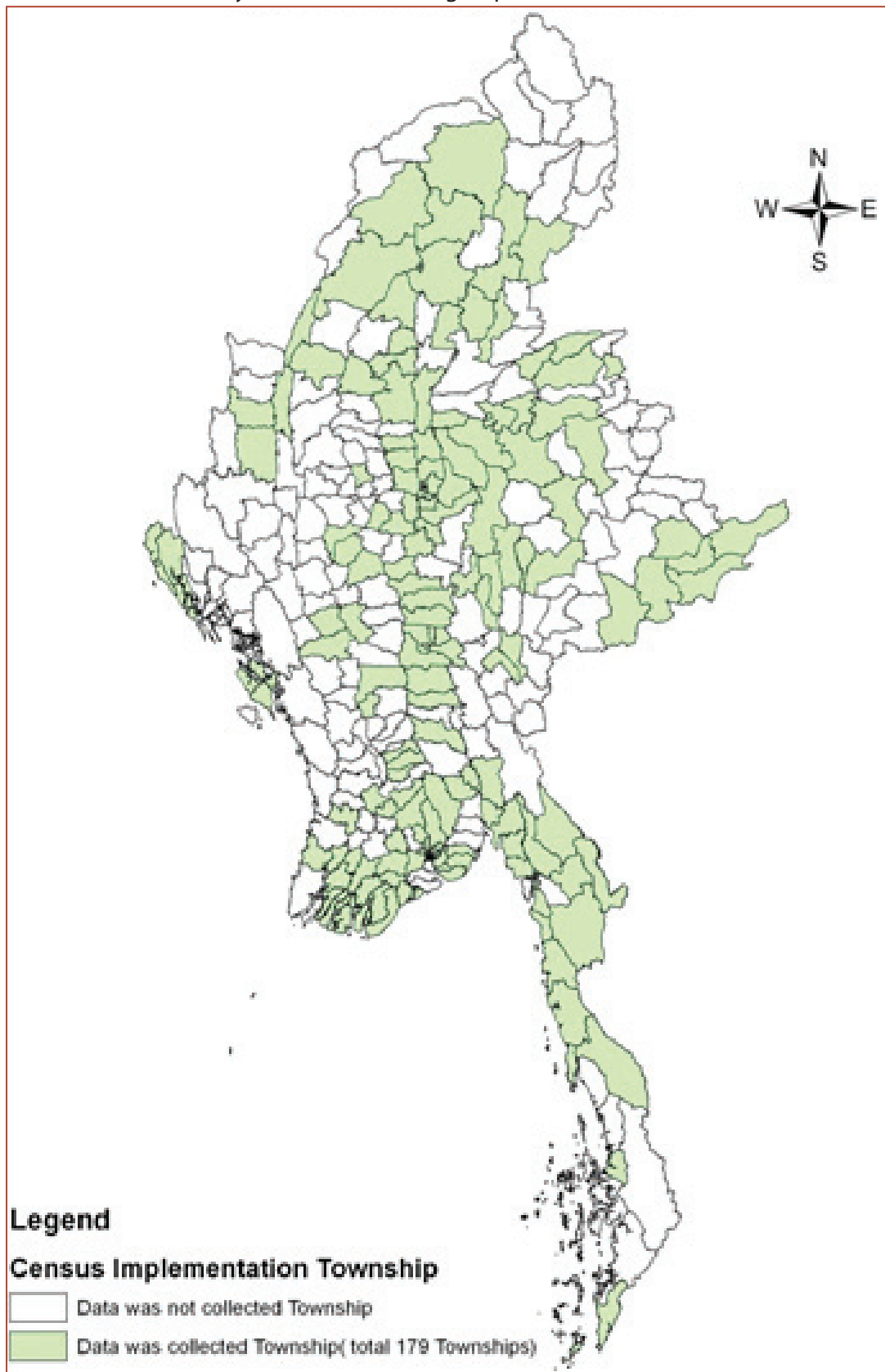
Data collection: Identification and location of firms

Before the data collection there was a process of consolidation of the administrative records used in the census. From that analysis, 2370 firms (4%) were duplications which were cleared before going to the field.

In the process of data collection 4689 firms (8.1%) were not found as per the available information. The enumerators were instructed to try to find out if the firm has relocated. There were 261 firms which were referred from and to each other.

Once located, the enumerator verified the condition of the firm, to separate those that are in operational conditions from those that are closed and unable to operate in the short run. This verification brought the number of identified to 50541, 88% of the total of the administrative records.

The number of firms that are non-operational is significantly high, accounting for 34% of the total of the registry, meaning that the record did not take into account the status of the business, but also that due to the lax tax collection system, there is no need or urgency to withdraw the firm from the records[2].

Table 1: Operational status of firms

	Number of Firms	Percentage of the Total	Percentage of the found firms
Number of Firms Duplicated in Listing or not found in the field	7,059	12%	-
No. of firms Operating	31,093	54%	62%
No. of firms Not-Operating	19,448	34%	38%
Total	57,600		

Even if in table 1, where are included those not found in the field and closed firms, the percentage of non-operational firms is 38%, the regional differences are quite significant. The ratio of non-operational firms is over 54% in Yangon, 41% in Shan and 35% and 34% in Mon and Mandalay respectively.

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2   *This is a widespread issue all over the world, and mainly in countries with little enforcement of the taxing system. Anyhow the level in Myanmar is extremely high.*

Fig 2: Distribution of firms according to operational status by State and Region
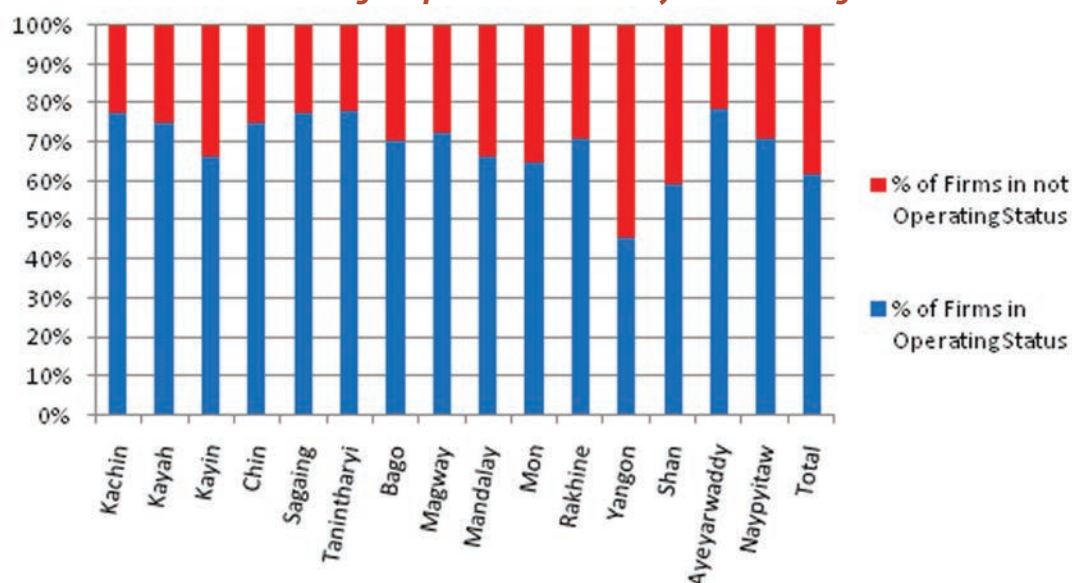
Yangon, accounts for 34% of the total registered firms. However, 54% of these were not found or not operational during the data collection. This accounts for half the non-operational firms in the country. The duplicated firms in Yangon were 30% of the total. Yangon also accounts for half of those firms found to be closed or non-operational.

On the other hand, Mandalay, which accounts for 19% of the total registered firms, only had 4.5% not found during the data collection. However, 21.5% of the firms were duplicates. The share of closed or non-operational firms in Mandalay, is small is amounts to 17% of the total records.

One would expect that the pattern of the non-operational firms would be similar to those registered, but this is not the case in Yangon.

The non-operational firms signal that a large number of initiatives couldn't succeed in a framework of economic growth and deregulation of the economy. It is difficult to have a clearer picture which would have provided policy lessons.
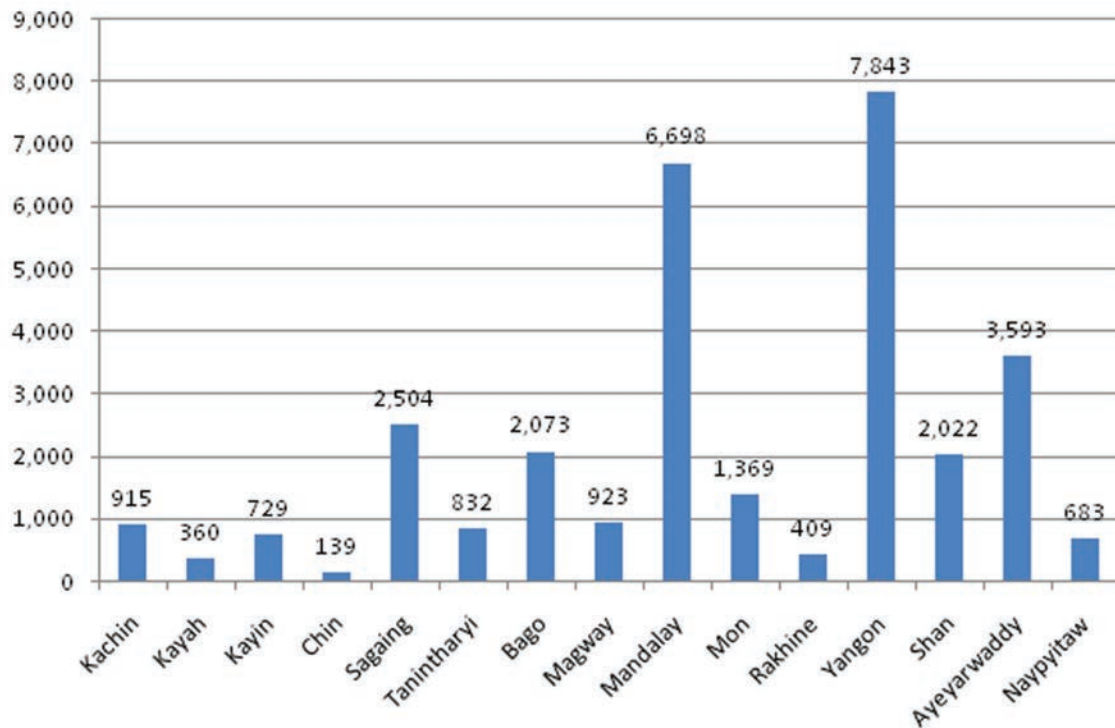
Distribution of firms by State and Region[3]

The distribution of operating firms by state and region shows the predominance of the two major urban centers of the country: Yangon and Mandalay, which together account between the two for almost half of the operating firms in the country (46.7%). The business survey revealed that two thirds of the total operating firms are in only four states/ regions of Myanmar – Yangon, Mandalay, Ayeyarwaddy and Sagaing. The North South corridor (Mandalay, Naypyitaw, Bago, Yangon) accounts for 55% of the operating firms in the country and represent a very narrow portion of the territory.

In contrast to this level of concentration of the top States and Regions, the nine less representative account for 20% or less of the total, while six for 10% or less. These considerations transcend the mere arithmetic of the survey since they have deep implications on the penetration of capitalist institutions in the territory of Myanmar, at least, aside from agricultural production.

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3   It will be very important to contrast the physical distribution of firms with the overall population after the 2014 Census is performed, to have a more clear picture of the levels of concentration and potentials.

Fig 3: No. of Firms in Operating Status by State and Region

Fig 4: Cumulative distribution of firms according to state
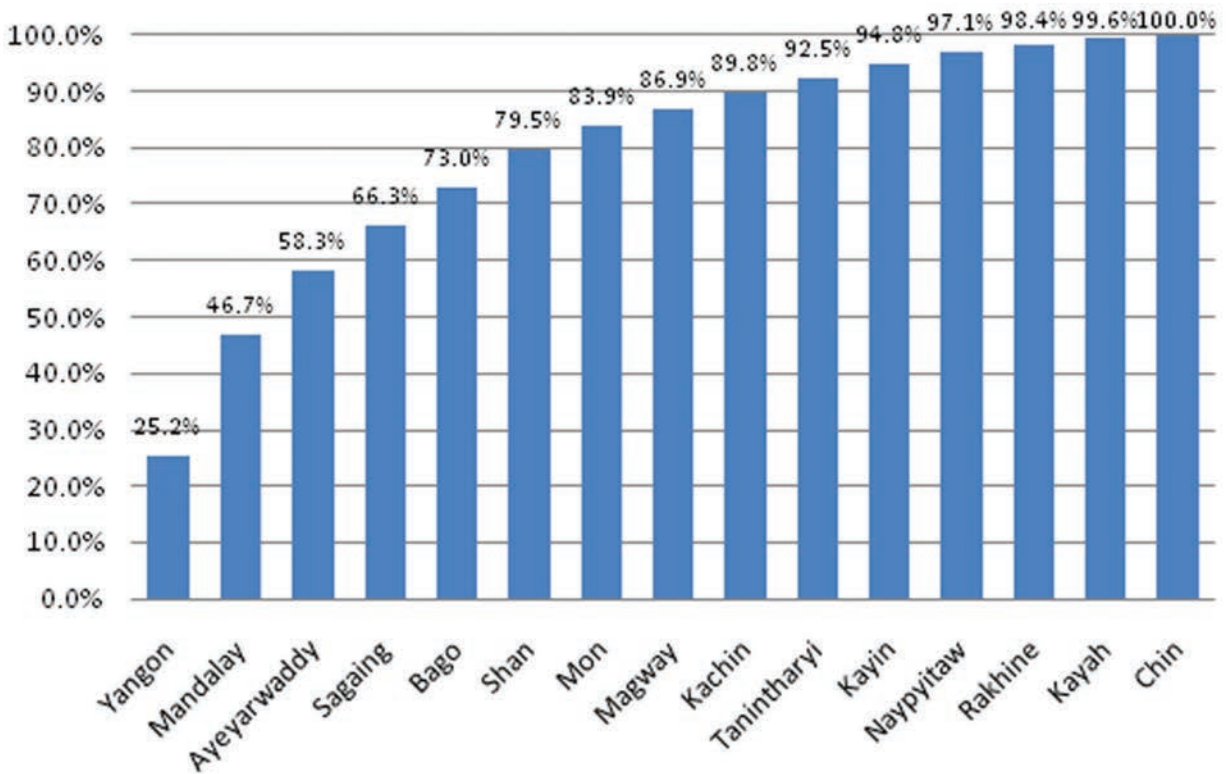
The cumulative distribution of firms, which depicts the concentration stated in the previous paragraph, is shown Figure 4.

Map of the distribution of registered firms by township according to numbers

Legend

Total Firms

☐	0
■	1 - 25
■	25 - 50
■	50 - 100
■	100 - 500
■	> 500
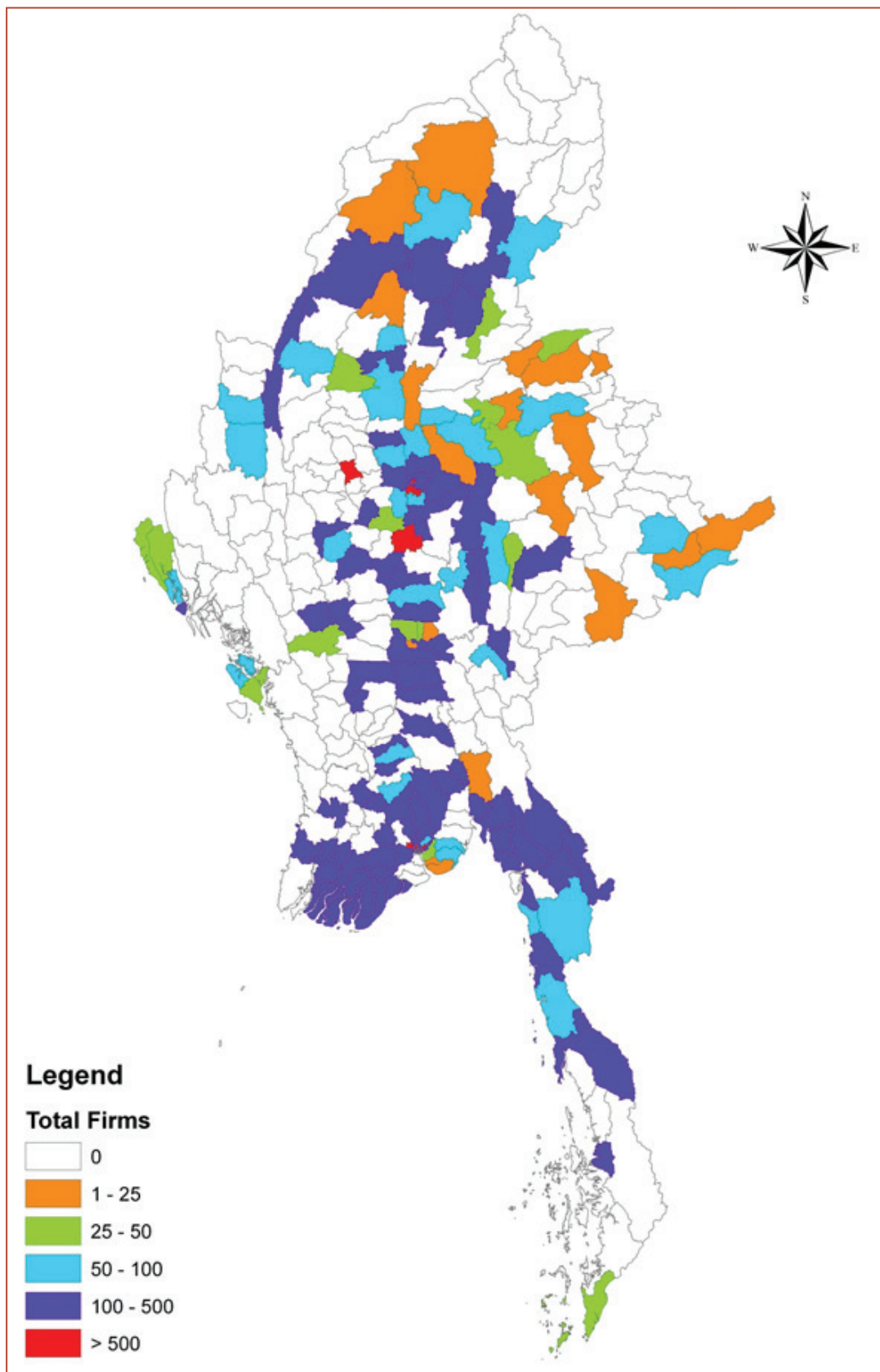
Of the enumerated 179 townships, 40 have between 151 and 250 firms, while 101 have between 100 and 500. Only 9 townships have more than 501 firms operational.

Fig 5: Distribution of Townships according to the number of operational firms

Series1	0	1 to 10	11 to 25	26 to 50	51 to 75	76 to 100	101 to 150	151 to 250	251 to 500	501 and more
	1	10	9	16	11	22	31	40	30	9
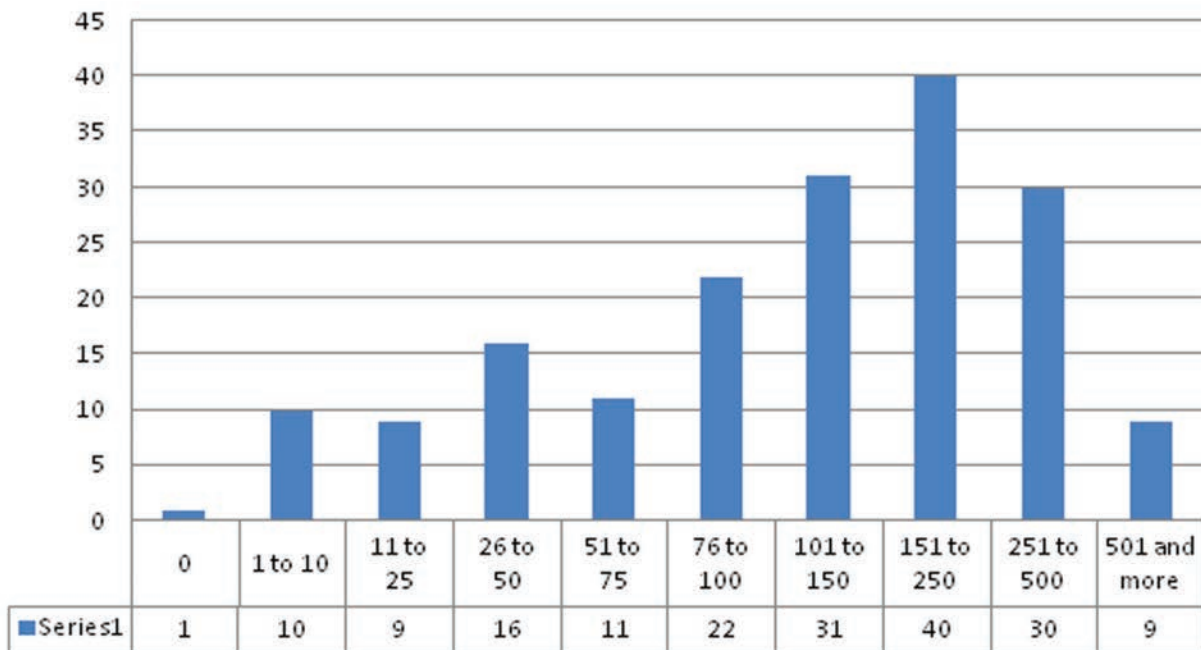
Fig 6: Number of Townships with firms larger than 100 workers
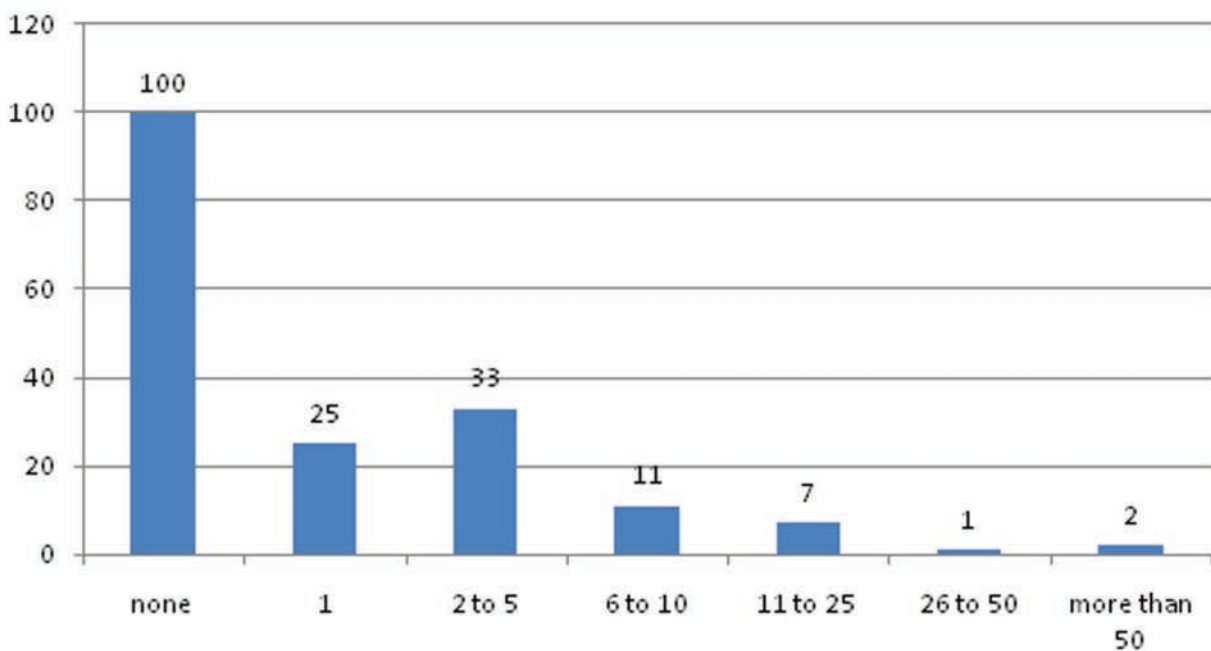
When firms with a workforce of 100 or more are considered, 100 of the enumerated townships were found not to have a workforce of this size, 25 have only one, and 33 townships show between two and five. Only 10 townships have more than 10 large firms with a workforce of 100 or more.

8

Establishments and products per firm

The level of differentiation and coverage of different activities in terms of number of establishments and products is another indicator of the development of the private sector in capitalist economies[4]. In Myanmar, according to the information from the fieldwork, there is a somewhat low level of sophistication and integration intra-firm.

Table 7: Number of firms according to number of establishments and products

	Firms	%
Single Establishment	30,908	99.4%
Multi Establishment	185	0.6%
Establishment with only Primary Product	29,496	94.9%
Establishment more than one Product	1,597	5.1%

Only 185 firms in the country have more than one establishment, what shows a very low level of expansion of domestic firms. This does not imply that there could be firms that belong to the same owner, but operate under different institutional arrangements[5].

At the State or Regional level, the highest ratio of multi-establishment firms is found in Naypyitaw, with 2.34% of the total, while in absolute terms, it is Mandalay with 74 multi establishment firms that account for 40% of the total in the country. Remarkably, Yangon has one of the lowest levels in this condition, but it could be due to the existence of different firms by the same owner.

In relation to the quantity of products produced (mainly for the manufacturing sector), only 5% of the firms produce a secondary product. This also shows a low level of complexity in the production process, very much related to the new development of the market and more deregulated economy. At regional level differences are big. While Naypyitaw and Magway account for 21% and 15% of the firms with secondary products, Yangon only has 2% for this category.

Only three States and Regions account for 50% of the firms with secondary production (Bago, Mandalay and Ayeyarwaddy with around 17% each); seven States and Regions have less than 5% of the total.

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4   *Vertical and horizontal integration expresses either in the related firms of scope of products in the productive process, which tends to be broader with more developed markets.*

5   *This type of behavior is difficult to identify in most economies, unless the firm goes public to the stock exchange and is obliged to report linkages or controls over others.*

Table 8: Summary of indicators by State and Region. Absolute numbers and ratios of total

State/ Region	Number of operating firms	Workers	Sales In 100.000 K	Fixed Assets In 100.000	Number of operating firms	Workers	Sales	Fixed Assets
Kachin	915	7,101	228,276	7,247,221	2.9%	1.5%	0.9%	18.7%
Kayah	360	1,595	28,136	52,152	1.2%	0.3%	0.1%	0.1%
Kayin	729	6,977	124,422	133,813	2.3%	1.5%	0.5%	0.3%
Chin	139	426	21,117	20,050	0.5%	0.1%	0.1%	0.1%
Sagaing	2,504	21,114	977,442	772,301	8.1%	4.5%	3.8%	2.0%
Tanintharyi	832	4,711	175,159	340,344	2.7%	1.0%	0.7%	0.9%
Bago	2,073	19,761	1,013,501	621,010	6.7%	4.3%	3.9%	1.6%
Magway	923	5,725	496,935	165,116	3.0%	1.2%	1.9%	0.4%
Mandalay	6,698	78,878	4,114,445	4,202,601	21.5%	17%	15.9%	10.8%
Mon	1,369	6,618	586,124	234,371	4.4%	1.4%	2.3%	0.6%
Rakhine	409	3,246	53,770	168,292	1.3%	0.7%	0.2%	0.4%
Yangon	7,843	257,420	14,628,397	21,791,855	25.2%	55.3%	56.5%	56.1%
Shan	2,022	19,474	543,515	795,373	6.5%	4.2%	2.1%	2.1%
Ayeyarwaddy	3,593	24,788	2,601,425	1,595,386	11.6%	5.3%	10.1%	4.1%
Naypyitaw	683	7,440	301,899	712,690	2.2%	1.6%	1.2%	1.8%
Total	31,092	465,274	25,894,563	38,852,575	100%	100%	100%	100%

Employment

The total number of workers in the registered firms in Myanmar accounted 456 thousand at the moment of the survey. Being the first such research, seasonality cannot be determined here. A regular surveys/censuses will help to understand more on the economic calendar of Myanmar and its dynamics.

Fig 9: Distribution of firms according to employment (number of workers). Overall country

10
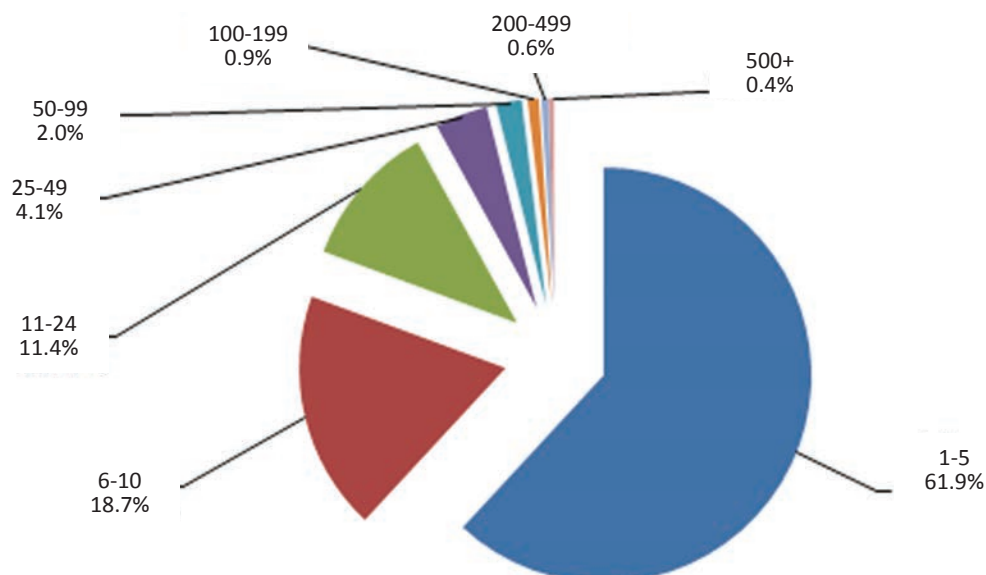
Fig 10: Distribution of workers according to size of the firm. Share and total number.
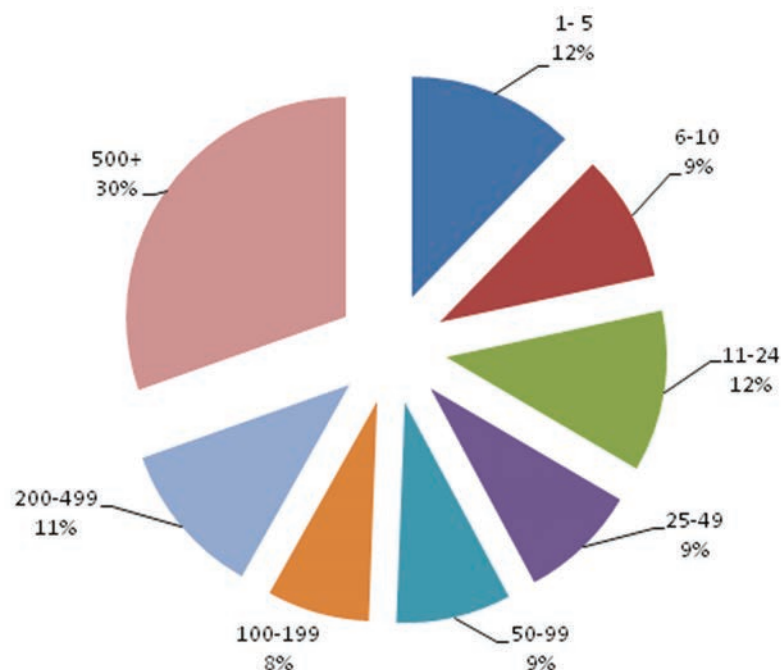
The number of registered workers in the private sector is quite small even for the most conservative estimates of the population of Myanmar[6]. It should be noted that the public sector is not included here, as well the military. Firms that may be publicly owned, but accounted as private sector[7] cannot be easily determined from this census report.

The firms with less than 10 employees represent 81% of the census, while accounting for 22% of total workers. On the other extreme, those with 100 and more workers account for 48% of total workers, showing a significant concentration, as well polarization in the labor force. Mid-size firms account for one quarter of the workers and constitute the 17% of total firms in the census.

The segments of mid-size firms are distributed with similar shares, what shows the polarization in the private sector between small and very large firms. It is quite possible that in the near future the share of medium scale firms, especially in manufacturing sectors, aimed at the domestic market will start to increase their relative weight in the overall economy.

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6   We didn't have access to the records of the social security system, which should be the one with the total number of registered workers.

7   There are a few very large ones that belong to the public sector, registered as private and the workers are under the private sector labor laws.

Fig 11: Cumulative distribution of employees per firm.
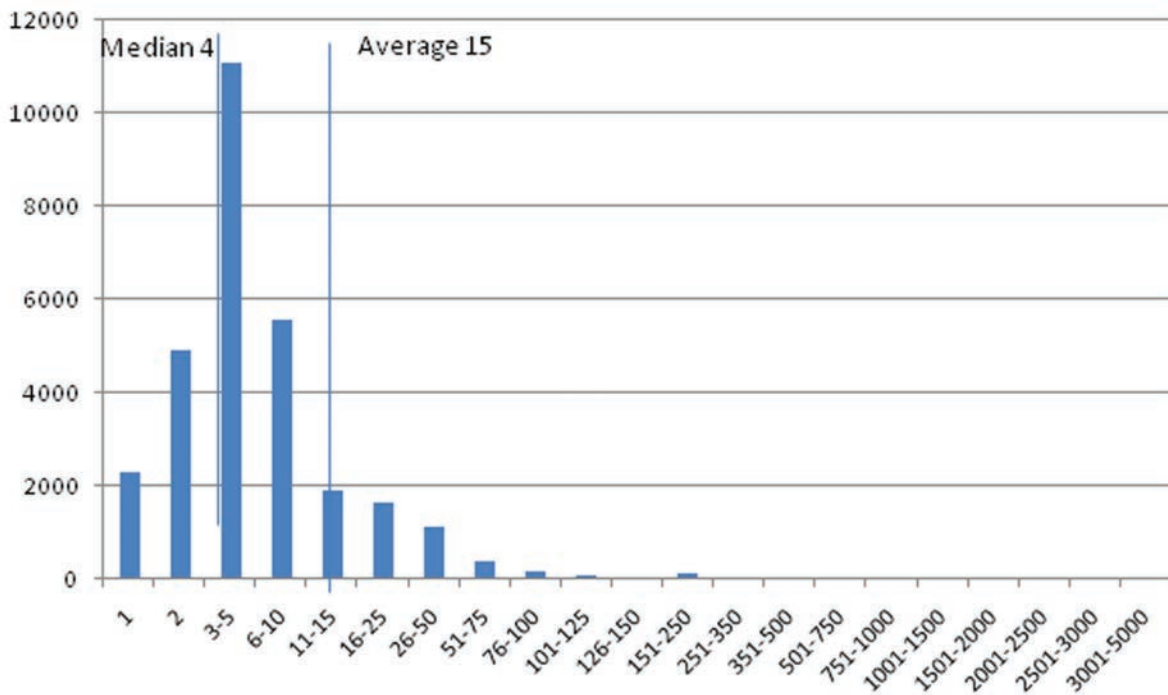
The chart depicts the frequency distribution of firms according the number of employees. The average number of workers per firm (excluding those that declare zero workers) is 15, but as shown, the median is only 4 employees. This is a sign of a very heterogeneous and polarized distribution, where a few very large firms account for one third of the total workers. In the cumulative analysis, it is found that 87% of the firms employ less than the average or mean of 15 which shows a skewed distribution.

Sales

Fig 12: Distribution of firms according to sales (Million Kyat per year). Overall country 2012-2013
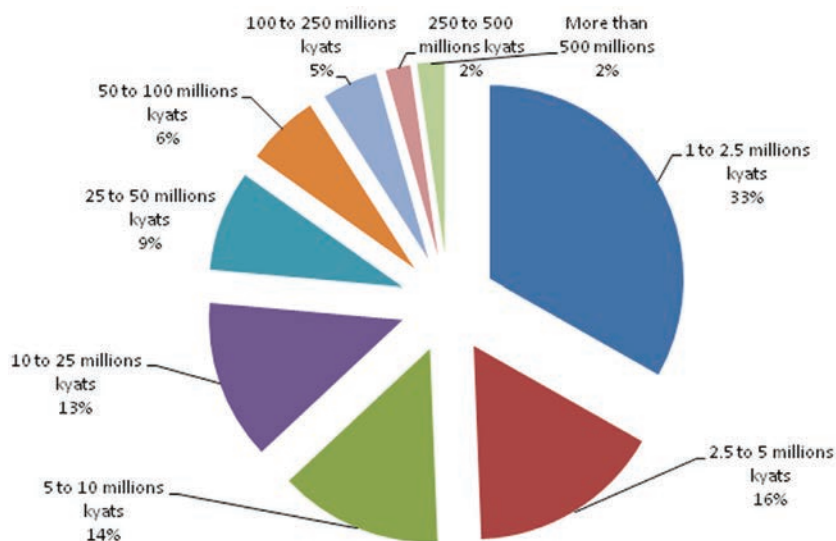
Half of the firms in Myanmar declare sales of less than 5 million MMK per year. This is a very low mark, especially taking into account the weight of manufacturing sector in the overall structure. 25%of the firms have annual sales of between 10 and 50 million Kyat, while the remaining 15% exceed 50 million Kyat.

Fig 13: Distribution of sales according to firm scale of sales (Million Kyat per year). Overall country 2011-2012

Table 14: Distribution of firms according to sales 2012/13 and employment (# workers)
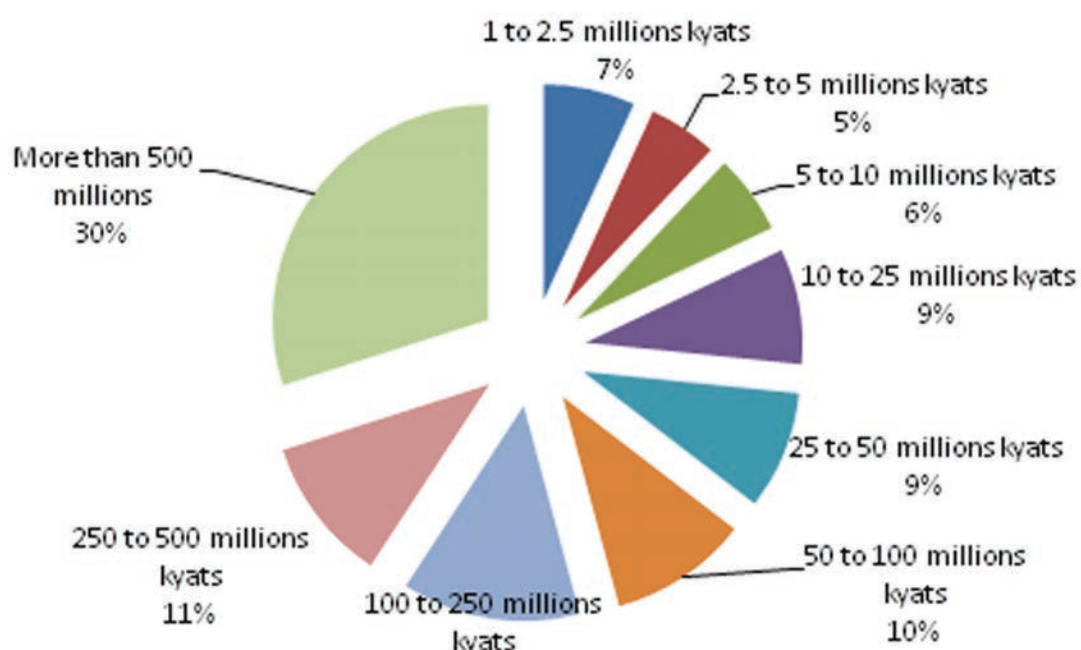
Classification of Employees	1 to 2.5 mill. kyats	2.5 to 5 mill. kyats	5 to 10 mill. kyats	10 to 25 mill. kyats	25 to 50 mill. kyats	50 to 100 mill. kyats	100 to 250 mill. kyats	250 to 500 mill. kyats	More than 500 mill.	Total
1- 5	30.4%	12.5%	8.2%	5.9%	2.6%	1.2%	0.7%	0.2%	0.1%	**61.8%**
6- 10	2.2%	2.7%	3.7%	4.3%	2.8%	1.8%	0.9%	0.3%	0.2%	**18.9%**
11- 24	0.5%	0.8%	1.5%	2.5%	2.0%	1.8%	1.4%	0.6%	0.5%	**11.4%**
25 - 49	0.1%	0.1%	0.2%	0.6%	0.7%	0.7%	0.9%	0.4%	0.4%	**4.1%**
49- 99	-	-	0.1%	0.1%	0.2%	0.4%	0.4%	0.3%	0.5%	**2.0%**
100-200	-	-	-	-	0.1%	0.1%	0.2%	0.1%	0.2%	**0.9%**
200-499	-	-	-	-	-	0.1%	0.1%	0.1%	0.2%	**0.6%**
500+	-	-	-	-	-	-	-	0.1%	0.3%	**0.4%**
Total	**33.2%**	**16.2%**	**13.6%**	**13.4%**	**8.4%**	**6.1%**	**4.7%**	**2.1%**	**2.3%**	**100%**

Table 15: Distribution of workers according to size and sales Table 15: Distribution of workers according to size and sales[8]

| Classification of Employees	1 to 2.5 mill. kyats	2.5 to 5 mill. kyats	5 to 10 mill. kyats	10 to 25 mill. kyats	25 to 50 mill. kyats	50 to 100 mill. kyats	100 to 250 mill. kyats	250 to 500 mill. kyats	More than 500 mill.	Total
1- 5	5.0%	2.6%	1.9%	1.5%	0.7%	0.3%	0.2%	-	-	**12.2%**
6- 10	1.1%	1.3%	1.8%	2.2%	1.4%	0.9%	0.5%	0.2%	0.1%	**9.4%**
11- 24	0.4%	0.8%	1.4%	2.5%	2.1%	1.9%	1.5%	0.6%	0.6%	**11.8%**
25 - 49	0.1%	0.2%	0.4%	1.3%	1.5%	1.5%	1.9%	1.0%	0.9%	**8.7%**
49- 99	0.1%	-	0.3%	0.6%	1.0%	1.7%	1.6%	1.1%	2.1%	**8.4%**
100-200	-	0.1%	-	0.2%	0.9%	1.1%	2.1%	1.1%	2.0%	**7.5%**
200-499	-	0.1%	0.1%	0.4%	0.4%	1.1%	2.5%	2.5%	4.4%	**11.4%**
500+	0.2%	-	-	0.1%	0.9%	1.8%	3.1%	4.4%	19.9%	**30.4%**
Total	**6.9%**	**5.20%**	**6%**	**8.6%**	**8.9%**	**10.4%**	**13.4%**	**10.9%**	**29.9%**	**100%**

30% of workers generate sales of more than MMK 500 million per year, and one quarter of those are firms employ more than 200 employees. 15% of the workers are in firms that declare less than MMK 10 million per year and in establishments with less than 10 workers.

Table 16: Distribution of sales according to workers and scale of sales

Classification of Employees	1 to 2.5 mill. Kyats	2.5 to 5 mill. Kyats	5 to 10 mill. Kyats	10 to 25 mill. Kyats	25 to 50 mill. Kyats	50 to 100 mill. Kyats	100 to 250 mill. Kyats	250 to 500 mill. Kyats	More than 500 mill.	Total
1- 5	0.4%	0.6%	0.7%	1.1%	1.1%	1.0%	1.3%	0.7%	1.2%	**8%**
6- 10	0.1%	0.1%	0.3%	0.8%	1.2%	1.5%	1.7%	1.2%	2.9%	**9.8%**
11- 24	-	0.1%	0.1%	0.5%	0.9%	1.6%	2.5%	2.4%	8.6%	**16.7%**
25 - 49	-	-	-	0.1%	0.3%	0.6%	1.7%	1.9%	7.4%	**12.1%**
49- 99	-	-	-	-	0.1%	0.4%	0.7%	1.1%	13.2%	**15.5%**
100-200	-	-	-	-	0.1%	0.1%	0.5%	0.6%	6.6%	**7.8%**
200-499	-	-	-	-	-	0.1%	0.3%	0.5%	10.6%	**11.5%**
500+	-	-	-	-	-	-	0.1%	0.4%	18.3%	**18.8%**
Total	**0.5%**	**0.7%**	**1.2%**	**2.6%**	**3.6%**	**5.3%**	**8.8%**	**8.7%**	**68.6%**	**100.0%**

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[8] *In the table of the sales and number of employees was founded an outlier that was removed from the analysis due to the exceptionality of its operations. This does not affect the other values and ranks of the survey.*

Fig 17: Frequency distribution of firms according to sales in 2012/13 in million MMK
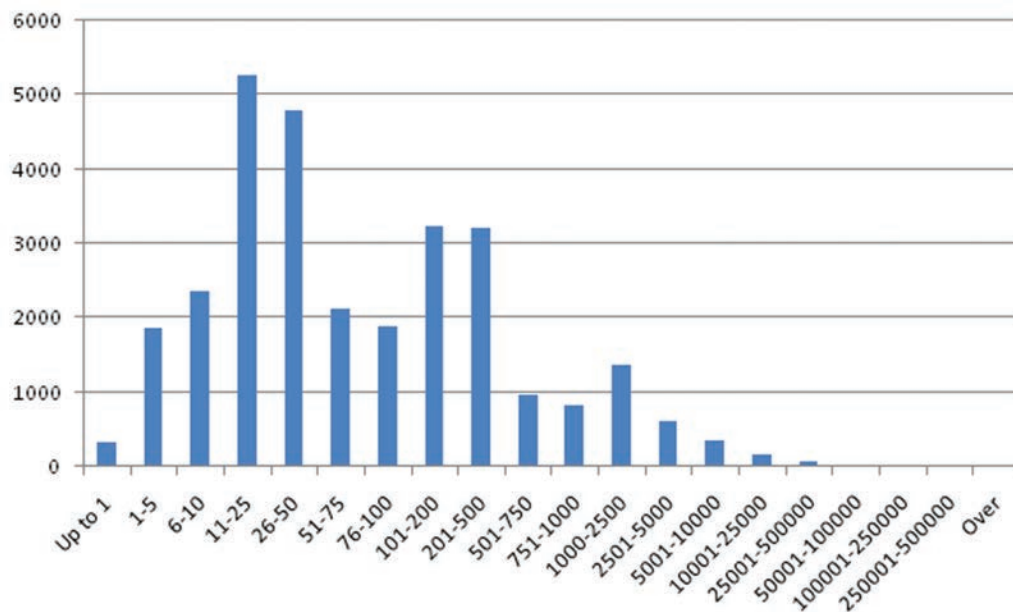
Fixed Assets

The declared assets of firms provides a proxy to the capital stock that the productive sector of the country has. However it has limitations. Similar to other economies with volatile exchange rates, the declared assets may not really reflect the market value of the capital stock due to those variations. A clearer picture of the productive capacity measured by the capital stock will be obtained from future business surveys that will be able to discriminate between construction, machinery, vehicles, etc. according the different productive sectors of the economy.

Fig 18: Distribution of firms according to capital stock in million MMK
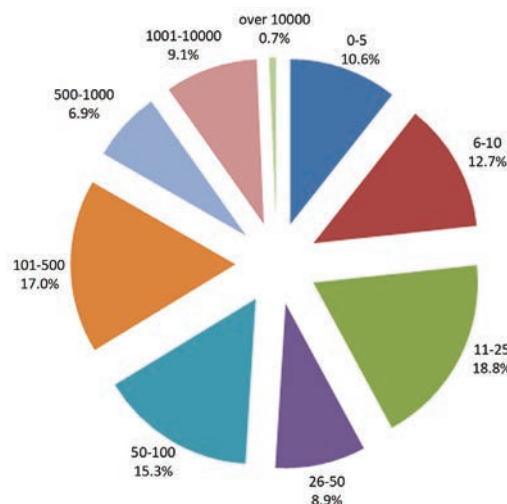
The heterogeneity in the capital stock of firms is one of characteristics of an early stage of development of markets. Almost one fourth of the firms have a capital stock between 1 and 2.5 million Kyats, while 19% are between 2.5 and 5 million Kyats.

Three quarters of the firms of this study have a capital stock of less than 25 million Kyats, approximately US$ 30.000, implying a very small investment, especially when compared to other economies. This is an indicator of a relatively low level of development.

Fig 19: Distribution of capital according ranges of capital stock
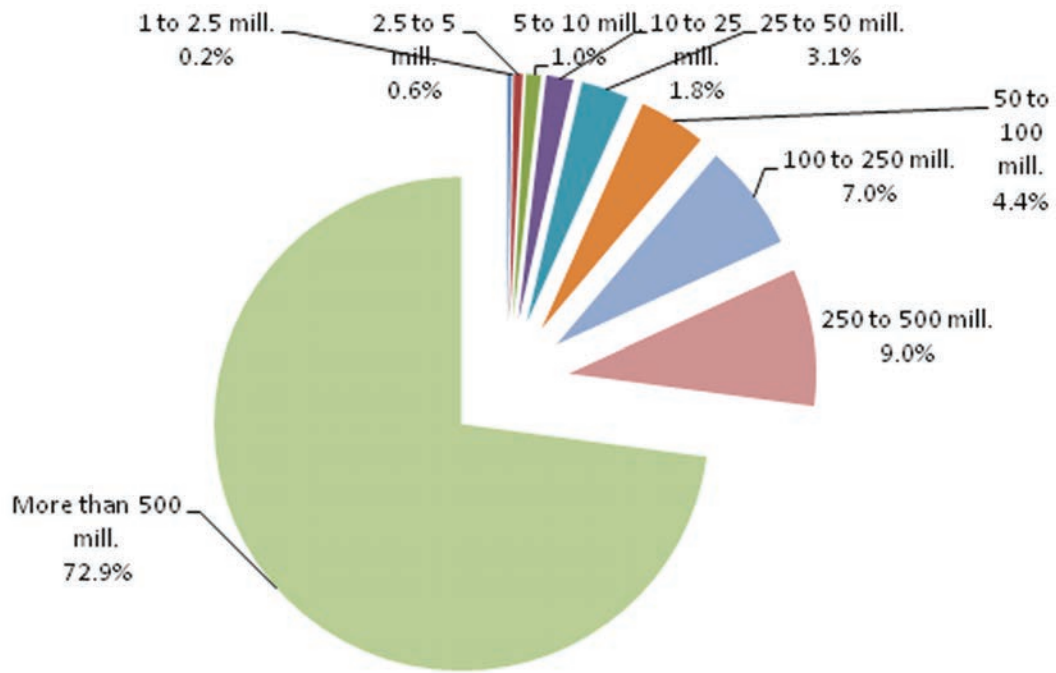
Fig 20: Frequency distribution of firms according to fixed assets declared.
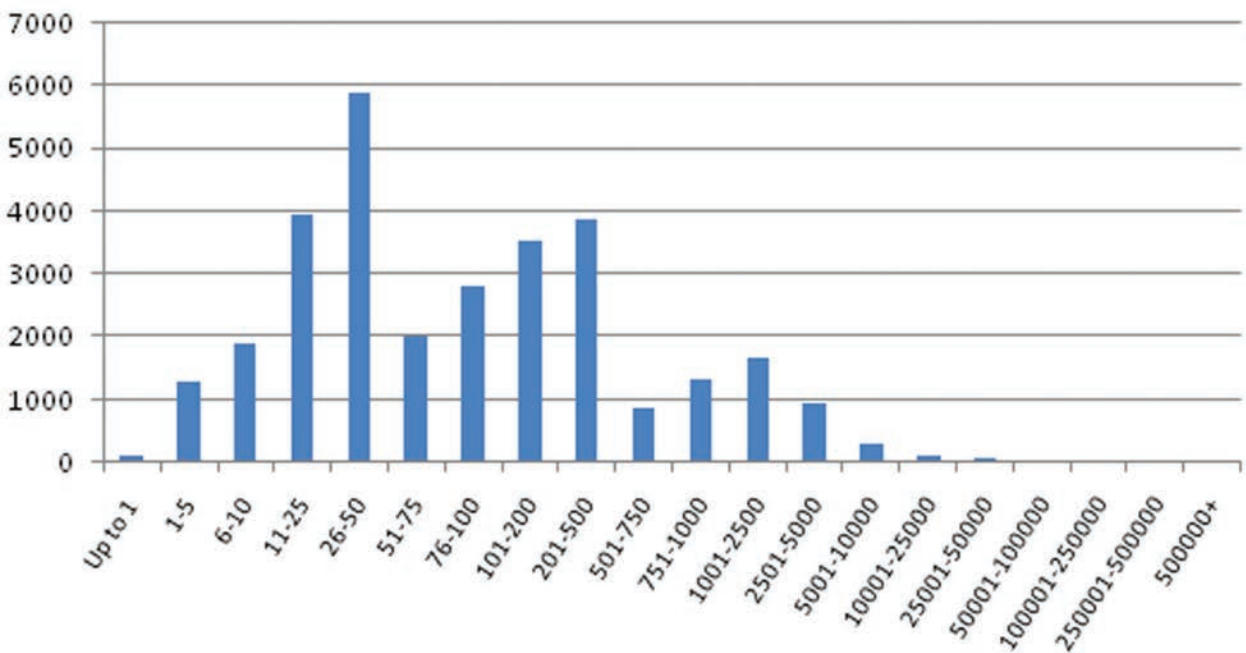
Sectoral distribution of firms

To analyse the sectoral distribution of firms the Standard Industrial Classification was adapted to the structural characteristics of the country. Fig 21 summarizes the results at one digit of that classification, although they can be further disaggregated.

Table 21: Sectoral distribution of firms

Myanmar Standard Industrial Classification (MSIC)

Sec	Code	Description	% of total
C	10-33	Manufacturing	82.6%
G	45-47	Wholesale and retail trade; repair of motor vehicles and motorcycles	8.9%
F	41-43	Construction	2.1%
B	05-09	Mining and quarrying	1.5%
N	77-82	Administrative and support service activities	1.2%
D	35	Electricity, gas, steam and air conditioning supply	0.7%
H	49-53	Transportation and storage	0.7%
A	01-03	Agriculture, Forestry , Livestock and Fishing	0.3%
J	58-63	Information and communication	0.3%
M	69-75	Professional, scientific and technical activities	0.3%
S	94-96	Other service activities	0.3%
I	55-56	Accommodation and food service activities	0.2%
K	64-66	Financial and insurance activities	0.2%
P	85	Education	0.2%
R	90-93	Arts, entertainment and recreation	0.2%
L	68	Real estate activities	0.1%
Q	86-88	Human health and social work activities	0.1%
E	36-39	Water supply; sewerage, waste management and remediation activities	-
O	84	Public administration and defense; compulsory social security	-
T	97-98	Activities of households as employers; undifferentiated goods- and services-producing activities of households for own use	-
U	99	Activities of extraterritorial organizations and bodies	-

This analysis clearly shows the transitional characteristic of the Myanmar productive sector. Through the census is clear the predominance of manufacturing sector firms which highlights the bias towards registration by those that require special permissions for functioning (eg. Electricity supply for machinery, sewerage for residuals, etc.) as well as some institutional factors related to the enforcement of the registration at the local level (townships) and the taxing system.

There should be a unified record with a unique code for each firm that will also contribute for tax purposes. The lack of a unified record can also be the explanation of the large number of firms that were found as non-operational in the census.

The second largest sector is the one that includes trade (retail and wholesale) as well as

workshops, with almost 9% of the total number of firms. After that construction and mining with 1.5% and 1.2% respectively rank.

The lack of representation of Agriculture in the OPBC can be explained by the large number of very small estates, mainly of subsistence agriculture.

In the intra sectoral analysis the weight of each of the sub-sectors (at two digit disaggregation) is again quite heterogeneous. The largest subsector is the food processing with over 13 thousand firms representing 52% of the firms in the manufacturing sector. The food industry has an average of 7.6 workers per firm, reducing the weight of the sub-sector on total employment, contrasting with the national average of 15, as well the average of the manufacturing sector.

Manufacture of wood and of products of wood and cork, except furniture;manufacture of articles of straw and plaiting materials is the second largest with little over 9% of the firms of the sector, and almost 10 workers on average.

The third largest, although made up of very small firms is the sub-sector 33 (repair and installation of machinery) that accounts for 5.3% of the total employment, with an average of 3.7 workers per firm.

The textile industry gathers two sub-sectors: The manufacture of textiles and the manufacture of wearing apparel, with 633 and 1080 firms each. The first has an average of 27 workers per firm, while the latter reaches 106 workers on average. This is the largest in the manufacturing sector. The manufacture of electronics and the manufacture of electric equipment are also labor intensive. They have on average 65.8 and 50.6 workers per firm respectively.

The rest of the manufacturing sub-sectors are of a much smaller structure in relation to the number of workers employed.

Construction constitutes the highest ratio of employees per firm with 38.6 workers, followed by the financial sector with 35.6. It should be noted that in the case of the financial sector no discrimination in relation to the number of establishments per firm was made, similar to the retail sector, which is starting to show multi establishment firms.

A few agricultural production firms here are also big ones, reaching an average of over 30 workers per firm, reinforcing the assumption that those registered agricultural firms are the most advanced and linked to different markets.

The sectors of hospitality (Hotels and Restaurants), and the public utilities services are in the range of 20 -25 workers per firm, the same as the transport and storage sector. These activities will start to increase their scale with economic growth.

Fig 22: Sectors according to employees per firm
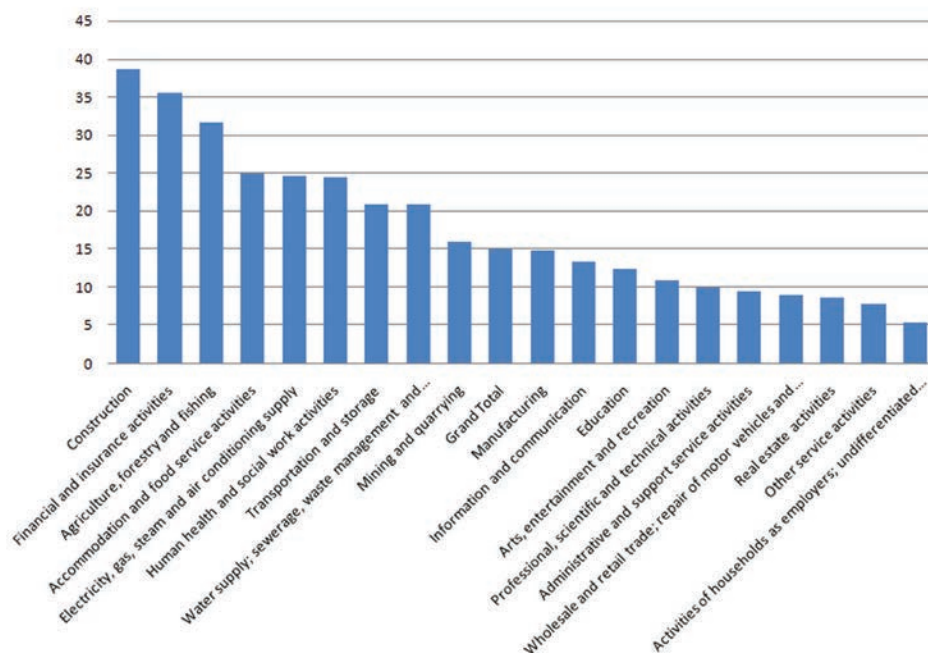
The rest of the sectors have a ratio under the national average of 15, and are typically services associated to self-employment or very low capital per worker ratio.

Fig 23: Sectors according to sales per firm in 2012/13
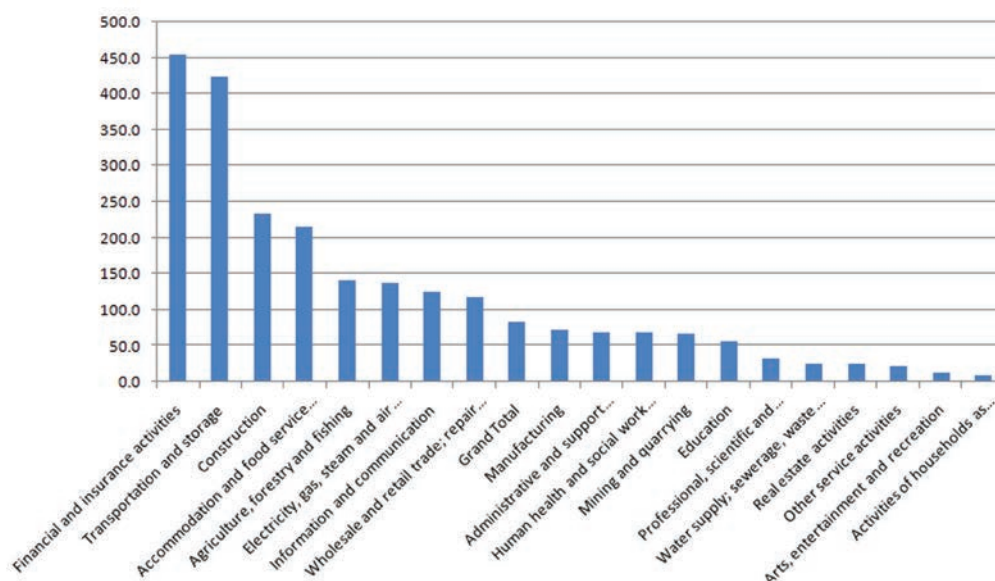
On average sales per firm in the census are 83 million MMK. The financial and insurance sector leads the ranking with 500 million MMK per year. The transportation and storage are second with 423 million MMK. This includes air and water transport, that have high sales due to the unit price, with other minor scale activities.

Construction and accommodation are between 200 and 250 million MMK and the rest well under that value.

Low productivity services are well under the national average of 83 million, including professional services and education, real estate, etc. again, those that are very much linked to self-employment service providers.

Fig 24: Sectors according to sales per employee
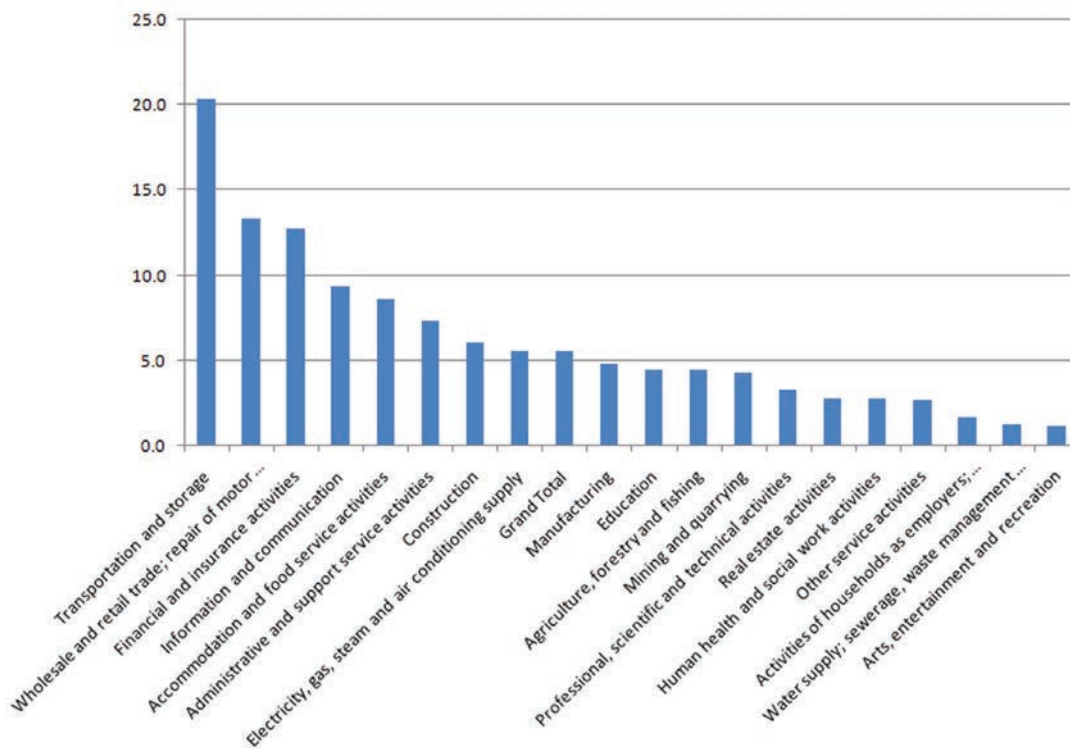
The ratio between sales and employees provides an interesting proxy to labor productivity according sector. The overall average is 5.6 million MMK worth of sales per worker, with 12 out of 19 sectors under that value.

Most of the services sector is under the average, but also the manufacturing sector, agriculture and mining, these with a wide heterogeneity among firms.

As expected in this type of expanding and transitional economy, transportation and storage, as well the trade sector (both wholesale and retail); and financial and insurance activities are amongst the highest, and with more than 10 million MMK worth of sales per worker. The rest of the sectors make less sales than that.

Sectors and fixed assets

The questionnaire inquired around the assets firms declared in their accounting books. In general there are regulations when it comes to the valuation of fixed assets that can be the price minus depreciations and revaluations, or the replacement value, or even the market value at the moment of the balance of the firm.

According to the different sectors and the origin of the capital these valuations may differ, but in the overall comparison they are also a proxy to the capital and labor productivity according to sectors, as well as provide an idea of the size, and many times complexity, of the average of the sector. The ratio between assets and workers is a very good proxy to the cost of a new job in the sector on average.

The sector with the highest assets per firm is mining and quarrying. This is not a surprise since the amount of infrastructure around firms, as well machinery (mainly vehicles) and tools are quite significant in the sector. The average is 1,920 million of MMK per firm, approximately US$ 1.7 million. This sector also leads in the ratio of assets per worker at 129 million MMK.

It is followed by the accommodation and food services sector, with 1496 million MMK per firm and 60.06 million MMK per worker.

Table 25: Assets per firm and employee according sectors MSIC in million MMK

MSIC Description	Assets per firm	Asset per employee
Mining and quarrying	1,920.1	121.1
Accommodation and food service activities	1,496.0	60.1
Financial and insurance activities	428.9	12.0
Construction	295.0	7.7
Transportation and storage	206.9	10.0
Electricity, gas, steam and air conditioning supply	204.7	8.3
Agriculture, forestry and fishing	165.7	5.2
Information and communication	117.8	8.9
Wholesale and retail trade; repair of motor vehicles and motorcycles	90.2	10.1
Manufacturing	89.1	6.0
Water supply; sewerage, waste management and remediation activities	64.3	3.1
Other service activities	64.2	8.2
Administrative and support service activities	62.0	6.6
Real estate activities	51.9	6.0
Professional, scientific and technical activities	50.0	5.0
Arts, entertainment and recreation	46.1	4.2
Education	44.7	3.6
Human health and social work activities	34.5	1.4
Activities of households as employers; undifferentiated goods- and services-producing	29.4	5.6
Total	**125.0**	**8.4**

The manufacturing sector, very heterogeneous and variable presenting sub sectors has a very low ratio: 89 million MMK per firm and 6 million MMK per worker, under the national average of 124.96 million MMK per firm and 8.35 million MMK per worker.

Table 26: Total firms, employees, sales and fixed assets per firm.

MSIC Description	Total Firms	Total Employee	Total sale 2012-13 (Mil. Kyats)	Fixed Asset (Mil. Kyats)	Employees per firm
Agriculture, forestry and fishing	101	3,193	14,283	16,732	31.6
Mining and quarrying	454	7,199	30,805	871,712	15.9
Manufacturing	25,682	382,313	1,851,906	2,286,950	14.9
Electricity, gas, steam and air conditioning supply	220	5,411	30,184	45,040	24.6
Water supply; sewerage, waste management and remediation activities	9	187	230	579	20.8
Construction	644	24,849	150,124	189,971	38.6
Wholesale and retail trade; repair of motor vehicles and motorcycles	2,754	24,485	325,716	248,334	8.9
Transportation and storage	217	4,507	91,908	44,892	20.8
Accommodation and food service activities	66	1,644	14,196	98,737	24.9
Information and communication	107	1,425	13,326	12,605	13.3
Financial and insurance activities	60	2,137	27,334	25,732	35.6
Real estate activities	43	376	1,061	2,232	8.7
Professional, scientific and technical activities	87	865	2,830	4,349	9.9
Administrative and support service activities	392	3,699	27,248	24,304	9.4
Public administration and defense; compulsory social security	-	-	-	-	-
Education	54	669	3,015	2,415	12.4
Human health and social work activities	34	830	2,316	1,173	24.4
Arts, entertainment and recreation	58	636	748	2,678	11
Other service activities	103	812	2,166	6,616	7.9
Activities of households as employers; undifferentiated goods- and services-producing	7	37	63	206	5.3
Activities of households for own use	-	-	-	-	-
Activities of extraterritorial organizations and bodies	-	-	-	-	-
Total	**31,092**	**465,274**	**2,589,456**	**3,885,258**	**15**

Table 27: Averages per sector MSIC

| MSIC Description	Total Firms	Total Employee	Total sale 2012-13 (Mil. Kyats)	Fixed Asset (Million Kyats)	Employees per firm	Sales per firm	Sales per emp	Assets per firm	Asset per emp
Mining and quarrying	454	7,199	30,805	871,712	15.9	67.9	4.3	1,920.1	121.1
Accommodation and food service	66	1,644	14,196	98,737	24.9	215.1	8.6	1,496	60.1
Financial and insurance activities	60	2,137	27,334	25,732	35.6	455.6	12.8	428.9	12
Construction	644	24,849	150,124	189,971	38.6	233.1	6	295	7.7
Transportation and storage	217	4,507	91,908	44,892	20.8	423.5	20.4	206.9	10
Electricity, gas, steam and air conditioning supply	220	5,411	30,184	45,040	24.6	137.2	5.6	204.7	8.3
Agriculture, forestry and fishing	101	3,193	14,283	16,732	31.6	141.4	4.5	165.7	5.2
Information and communication	107	1,425	13,326	12,605	13.3	124.5	9.4	117.8	8.9
Wholesale and retail trade; repair of motor vehicles and motorcycles	2,754	24,485	325,716	248,334	8.9	118.3	13.3	90.2	10.1
Manufacturing	25,682	382,313	1,851,906	2,286,950	14.9	72.1	4.8	89.1	6
Water supply; sewerage, waste management and remediation activities	9	187	230	579	20.8	25.6	1.2	64.3	3.1
Other service activities	103	812	2,166	6,616	7.9	21	2.7	64.2	8.2
Administrative and support service activities	392	3,699	27,248	24,304	9.4	69.5	7.4	62	6.6
Real estate activities	43	376	1,061	2,232	8.7	24.7	2.8	51.9	5.9
Professional, scientific and technical	87	865	2,830	4,349	9.9	32.5	3.3	50	5
Arts, entertainment and recreation	58	636	748	2,678	11	12.9	1.2	46.2	4.2
Education	54	669	3,015	2,415	12.4	55.8	4.5	44.7	3.6
Human health and social work activities	34	830	2,316	1,173	24.4	68.1	2.8	34.5	1.4
Activities of households as employers; undifferentiated goods- and services-producing	7	37	63	206	5.3	9	1.7	29.4	5.6
Total	31,092	465,274	2,589,456	3,885,258	15	83.3	5.6	125	8.4

A brief dynamic analysis of firm creation

The main objective of the Business Census was to consolidate the administrative records, in order to have a robust sampling framework for a more detailed business survey in the future. A brief analysis of the dynamic of firm creation and closures- can be obtained for the two periods for which information is available.

In this respect taxonomy of the firms has been created under the following rules:

- Fully operational old firm (with two or more years of operations): firms that declare to have employees, sales both in 2011/12 and 2012/13 and with fixed capital or not. (the latter can be the result of the accounting exhaustion of the capital e.g. amortization)
- New firms fully operational in 2013: Firms that declare sales in 2012/13, no sales in 2011/12, employees and fixed assets.
- New firms starting in 2013: firms that declare employees, but zero sales in both periods, and may declare or not assets.
- Old firms non-operational or closing in 2013: firms that declared sales in 2011/12, but not sales in 2012/13, and may have declared employees (temporary stop) or not (permanent stop) and declared or not fixed assets.

According to these categories, amongst the 31093 firms, about 8.5% fall in the category of new firms (fully operational or starting). This number is slightly higher than the standard number of firm creation found in Asia (around 5%) or in Latin America (3.5%) in most studies. It is consistent also with the process of deregulation of the economy that allowed the creation of new businesses in such a large scale. In some years, this will tend to get closer to 5%.

Fig 28: Distribution of firms according to time of operations
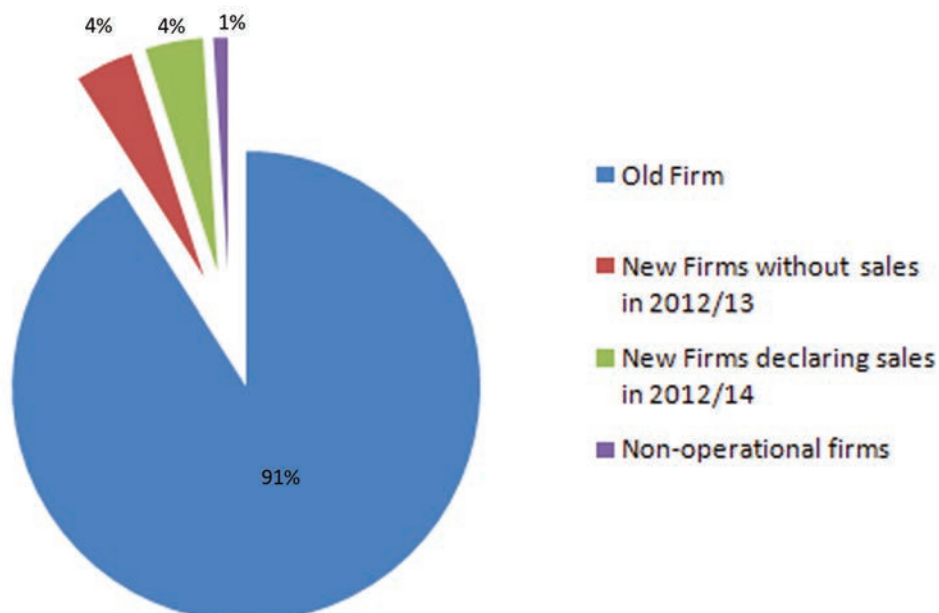
At the same time, the number of recently non-operational firms (0.5%) is fairly low, but this information should be complemented with that of non-operational firms that didn't answer the questionnaire or were not found in the field, representing over 40% of the total registered firms in the Census.

Table 29: Old, new and not operating firms per sector of MSIC

Myanmar Standard Industrial Classification (MSIC)	Old Firm	New Firm	New Firm not fully operational	Old Firm not fully operating in 2013
Agriculture, Forestry , Livestock and Fishing	61.4%	10.9%	26.7%	1.0%
Mining and quarrying	28.0%	10.1%	59.9%	2.0%
Manufacturing	96.5%	2.1%	1.0%	0.4%
Electricity, gas, steam and air conditioning supply	93.6%	2.7%	3.6%	-
Water supply; sewerage, waste management and remediation activities	88.9%	11.1%	-	-
Construction	46.3%	24.1%	28.3%	1.4%
Wholesale and retail trade; repair of motor vehicles and motorcycles	80.8%	10.2%	8.2%	0.8%
Transportation and storage	56.7%	24.4%	18.9%	-
Accommodation and food service activities	33.3%	21.2%	45.5%	-
Information and communication	64.5%	16.8%	16.8%	1.9%
Financial and insurance activities	31.7%	50.0%	16.7%	1.7%
Real estate activities	51.2%	20.9%	27.9%	-
Professional, scientific and technical activities	42.5%	20.7%	36.8%	-
Administrative and support service activities	42.9%	24.7%	32.1%	0.3%
Education	40.7%	33.3%	24.1%	1.9%
Human health and social work activities	52.9%	17.6%	29.4%	-
Arts, entertainment and recreation	93.1%	3.4%	3.4%	-
Other service activities	76.7%	13.6%	8.7%	1.0%
Activities of households as employers; undifferentiated goods- andservices-producing activities of households for own use	57.1%	28.6%	14.3%	-
Total	**91.2%**	**4.2%**	**4.1%**	**0.5%**

The assumption from the analysis of the sectoral disaggregation is that a high proportion of new firms can be further developed. New sectors, that require low per worker capital stock, such as education, show a much higher rate of new firms (33.3% and 24.1%) whereas manufacturing, a more mature sector, or with a longer tradition of operations in the country, shows 2.1% and 1.1% for the new firms, in operations or starting operations.

As an example, within the manufacturing sector, the manufacturing of food shows new firms for 1.9%, lower than the overall average, since it is a more mature sector, even if it has small firms operating in it, while beverages –which received new investments and expanded lines of production- reaches 6.7%. In the manufacturing sector there are emerging sub sectors within the new framework that show a very high level of firms creation, such petrochemical and manufacturing of coke (16.9%); pharmaceutical products (14.4%) or the extreme case of manufacture of computer, electronic and electrical products.

Regional analysis of the distribution of firms

Table 30: Summary of indicators by State and Region. Absolute numbers and ratios of total

State / Region	Number of operating firms	Workers	Sales (in 100,000 K)	Fixed Assets (in 100,000 K)	Number of operating firms	Workers	Sales	Fixed Assets
Kachin	915	7,101	228,276	7,247,221	2.9%	1.5%	0.9%	18.7%
Kayah	360	1,595	28,136	52,152	1.2%	0.3%	0.1%	0.1%
Kayin	729	6,977	124,422	133,813	2.3%	1.5%	0.5%	0.3%
Chin	139	426	21,117	20,050	0.5%	0.1%	0.1%	0.1%
Sagaing	2,504	21,114	977,442	772,301	8.1%	4.5%	3.8%	2.0%
Tanintharyi	832	4,711	175,159	340,344	2.7%	1.0%	0.7%	0.9%
Bago	2,073	19,761	1,013,501	621,010	6.7%	4.2%	3.9%	1.6%
Magway	923	5,725	496,935	165,116	3.0%	1.2%	1.9%	0.4%
Mandalay	6,698	78,878	4,114,445	4,202,601	21.5%	17%	15.9%	10.8%
Mon	1,369	6,618	586,124	234,371	4.4%	1.4%	2.3%	0.6%
Rakhine	409	3,246	53,770	168,292	1.3%	0.7%	0.2%	0.4%
Yangon	7,843	257,420	14,628,397	21,791,855	25.2%	55.3%	56.5%	56.1%
Shan	2,022	19,474	543,515	795,373	6.5%	4.2%	2.1%	2.1%
Ayeyarwaddy	3,593	24,788	2,601,425	1,595,386	11.6%	5.3%	10.1%	4.1%
Naypyitaw	683	7,440	301,899	712,690	2.2%	1.6%	1.2%	1.8 %
Total	**31,092**	**465,274**	**25,894,563**	**38,852,575**	**100%**	**100%**	**100%**	**100%**

The analysis of the maps with the distribution of firms according different characteristics in the country provides additional information on the regional coverage of firms, number of workers, large size firms, sales and assets. This also highlights the conformation that registered economic activities have in Myanmar, mainly alongside the North-South corridor, rather than East-West, that could be used to link the its two large neighbors: India and China, offering new opportunities for the development in a more even way.

Policy recommendations and conclusions

This first approach to the incorporated or registered sector of the economy of Myanmar provide some interesting ideas for policy recommendations that will improve the policy-making and administration of the economy, without much interference with the private sector.

- Need for an update in the registration of firms: The large amount of firms that are non-operational, overlapping and non-existing urge for a process of renewed registration. This will also help to update some of the information on the private sector.
- Definition of a system of identification of firms, with a unique code that would be used at Union and State and Region level. This will help to understand the dynamic of birth and death of firms.
- Centralize the records with the unique code. It could be accessed from the different institutions that may require the information (Ministries, public utilities firms, banks, etc.)
- Link the firms to the workers history. This will help the pension system, as well the follow up of the employment generation in the country.
- Keep a more precise identification of the sector of economic activity (MSIC) to understand the process at sectoral level.

- Share the codes and data with local authorities, exchanging information.
- Identify in a more precise way the markets to which firms direct their production. This will help further support to prioritized activities.
- Implement a system of "one stop shop" for all the permits and registration, and require, in order to clear the taxing system, to be de-registered when activities end.

Myanmar economy has an important potential of growth based in activities related both to the domestic as well to export markets. They can be led by the private sector, in the direction that National Policies require. However, the mere "invisible hand" of the market doesn't suffice to take full advantages of the potential in a way that could benefit wider sectors of the Myanmar population, with a perspective of inclusive growth.
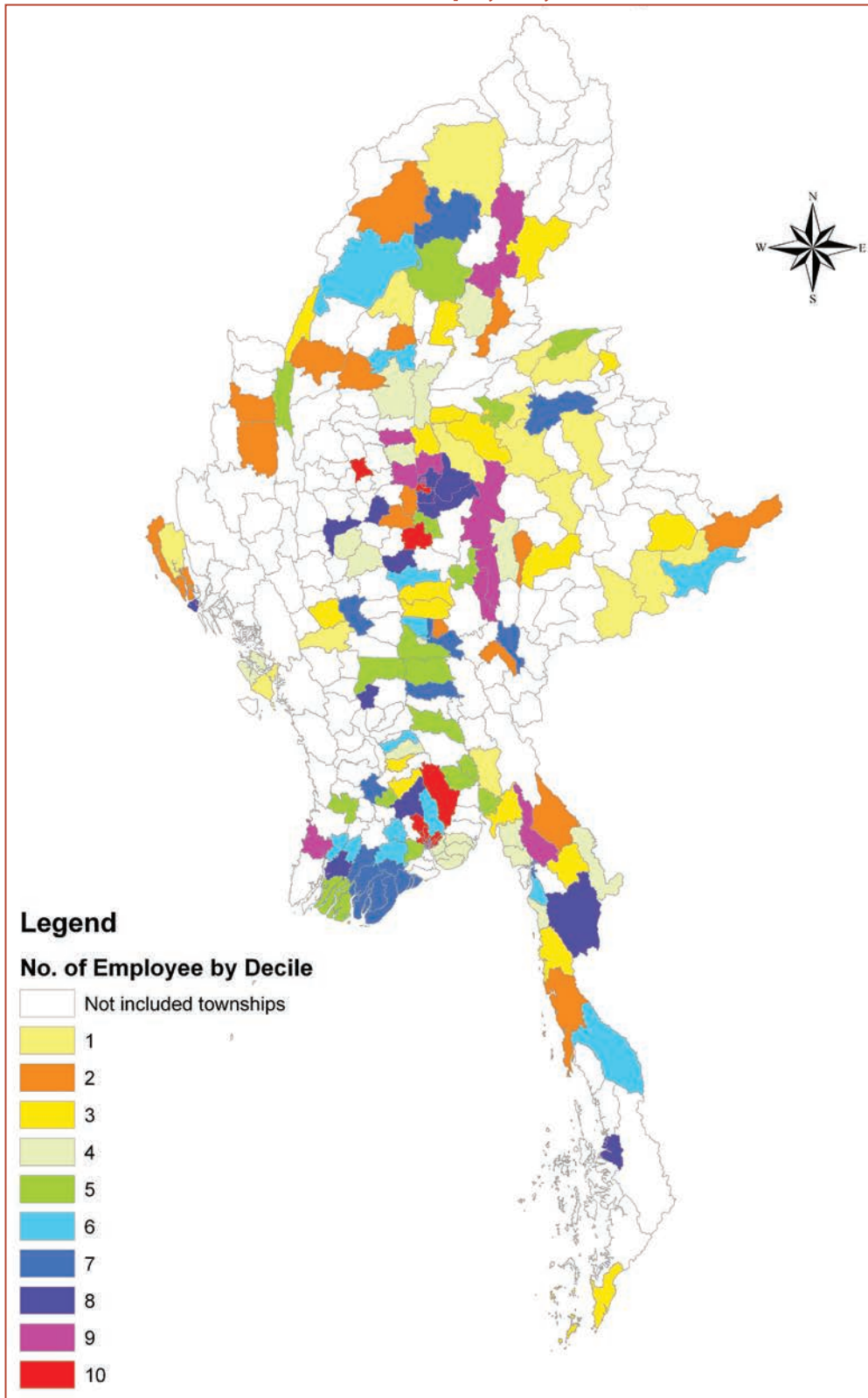
Annex 1: Mapping of townships by deciles

Distribution of Firms by Decile

Legend

No. of Firms by Decile

	Not included townships
	1
	2
	3
	4
	5
	6
	7
	8
	9
	10
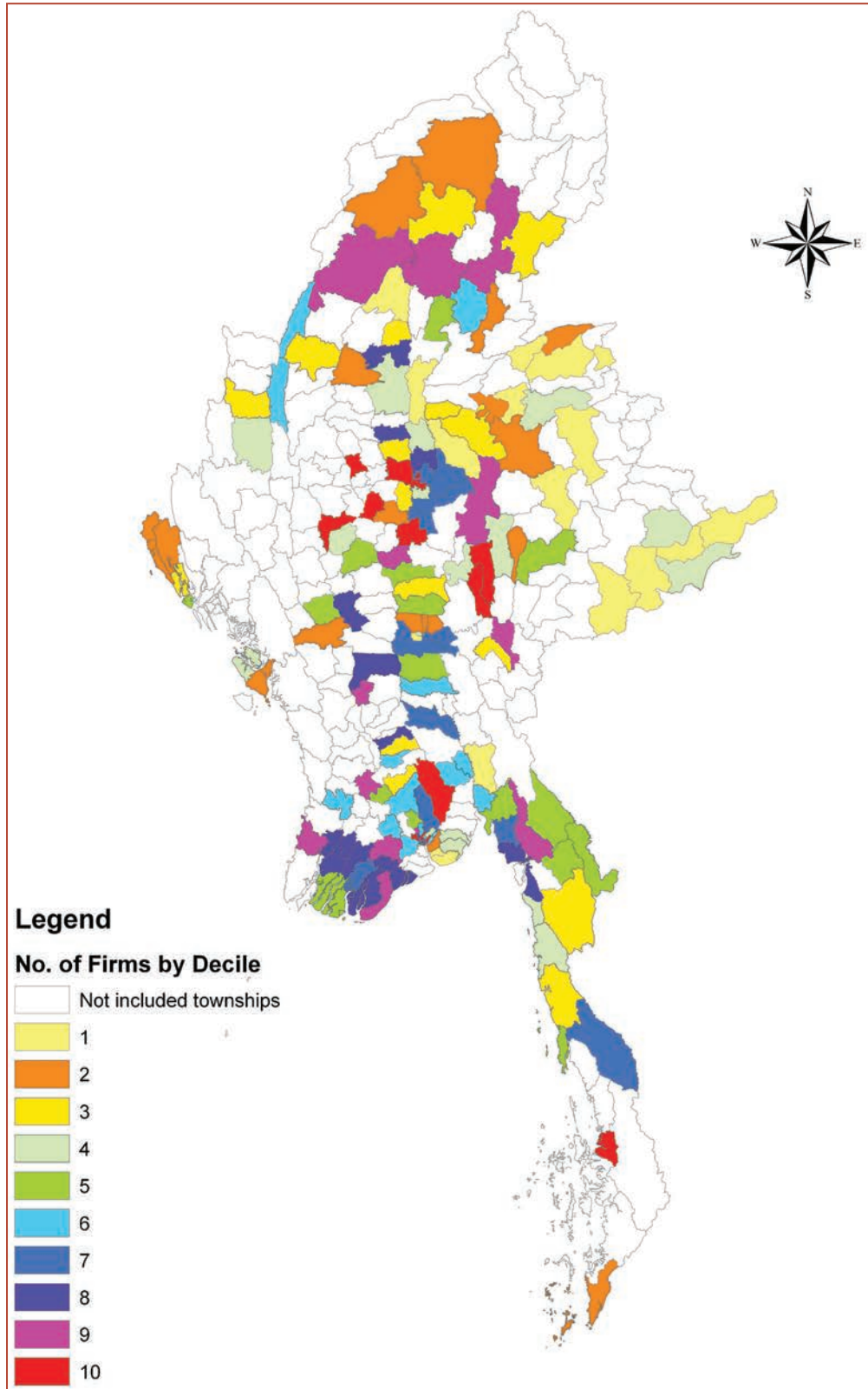
Decile	1	2	3	4	5	6	7	8	9	10
No of Firms	0-20	21-50	51-85	86-103	104 - 121	122 - 163	164 - 195	199 - 261	264 - 364	371 -1207

Distribution of Employee by Decile

Legend

No. of Employee by Decile

- Not included townships
- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10

Decile	1	2	3	4	5	6	7	8	9	10
No of Employees	0 - 123	127 - 324	327 - 522	529 - 684	691 - 909	960 -1353	1380 - 2006	2009 - 2797	2882 - 4832	4864 - 69131

Distribution of Total Sale 2012-13 by Decile

Legend

Amount of Total sale 2012-13 by Decile

- Not included townships
- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
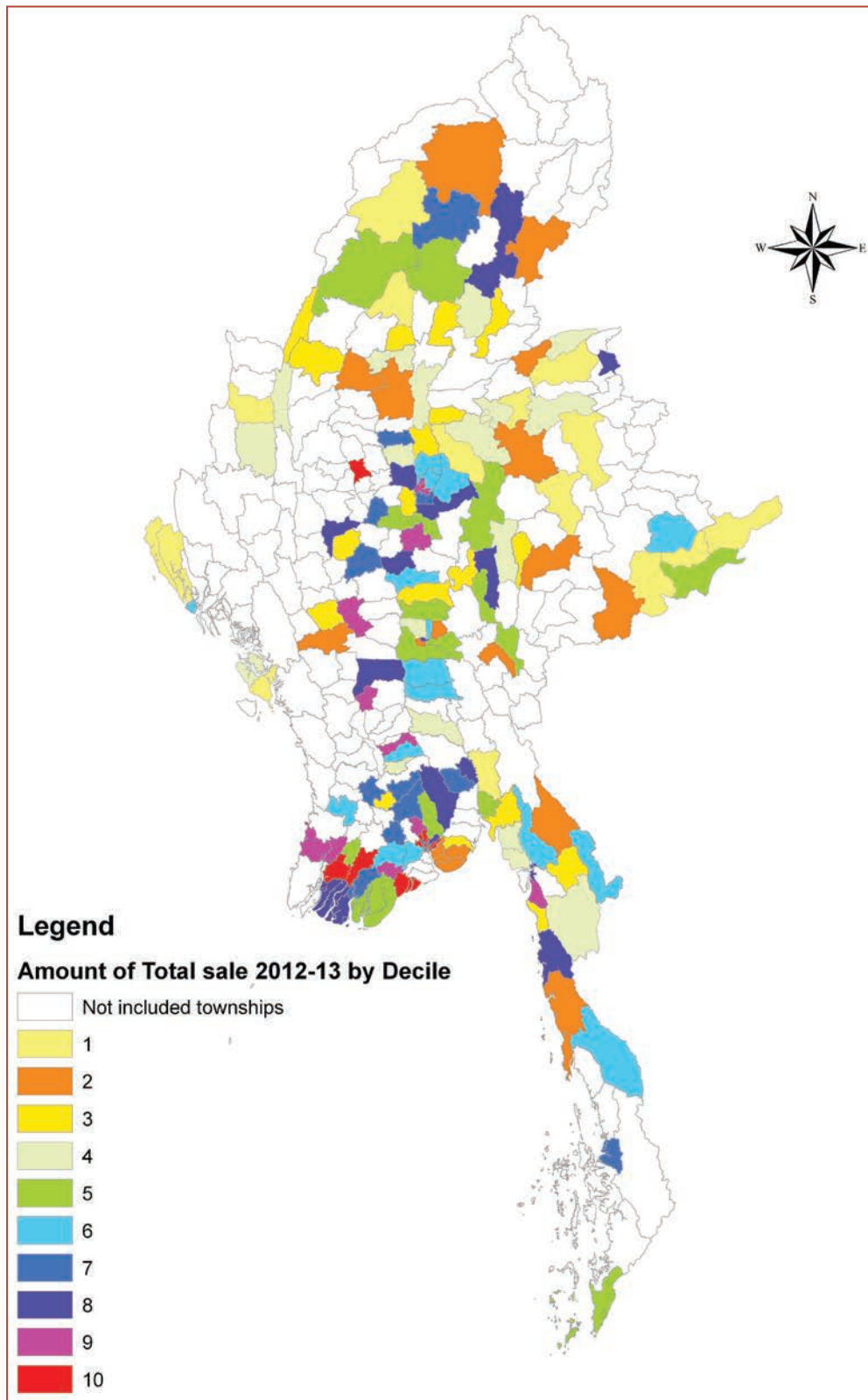
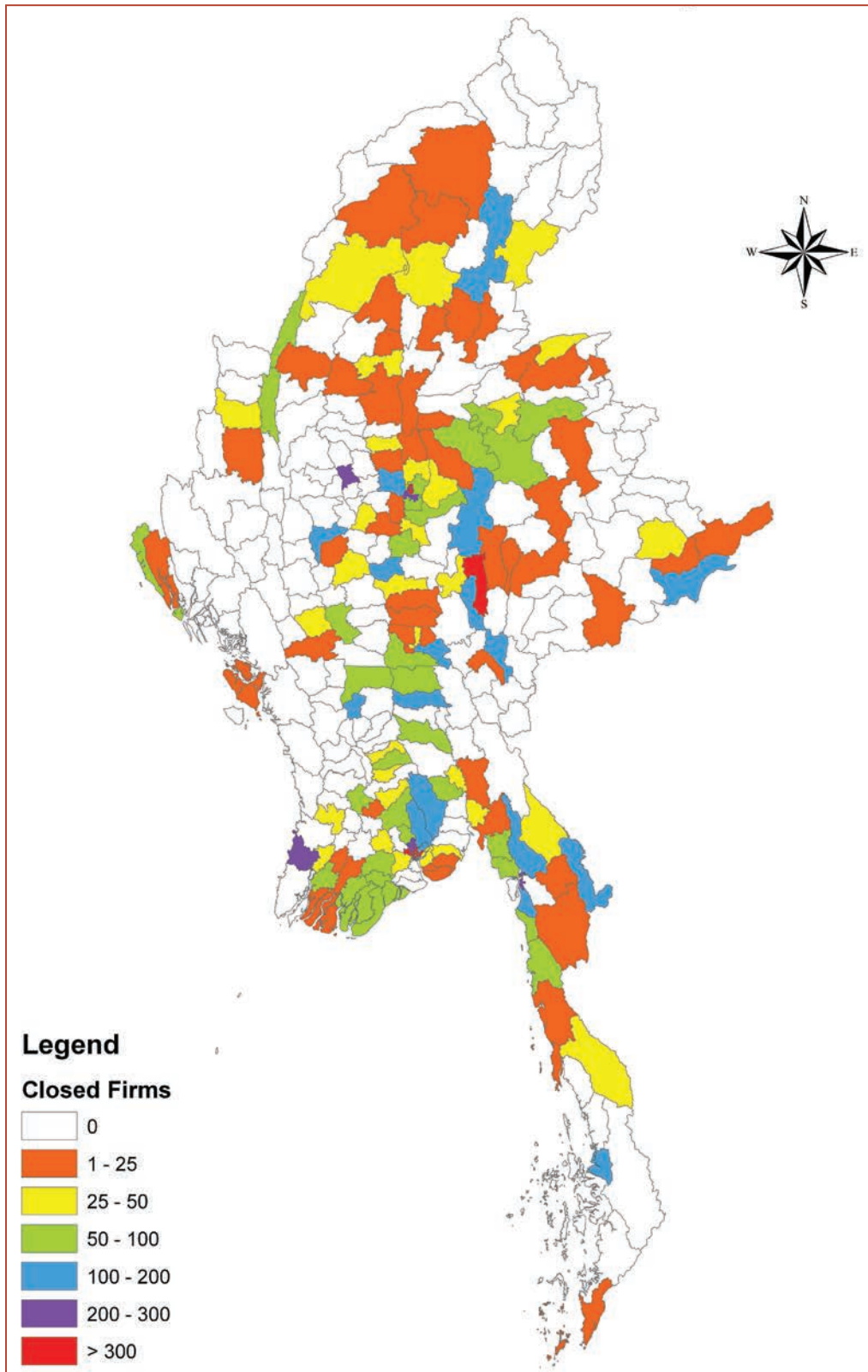| Decile	1	2	3	4	5	6	7	8	9	10
Total sale in Million Kyats	0-138	193 - 578	579 - 967	981 - 2078	2099 - 3898	3923 - 6343	6560 - 10246	10330 - 16543	16967 - 34927	36111 - 183030

Distribution of Fixed Asset 2012-13 by Decile

Legend

Amount of Fixed Asset by Decile

- Not included townships
- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
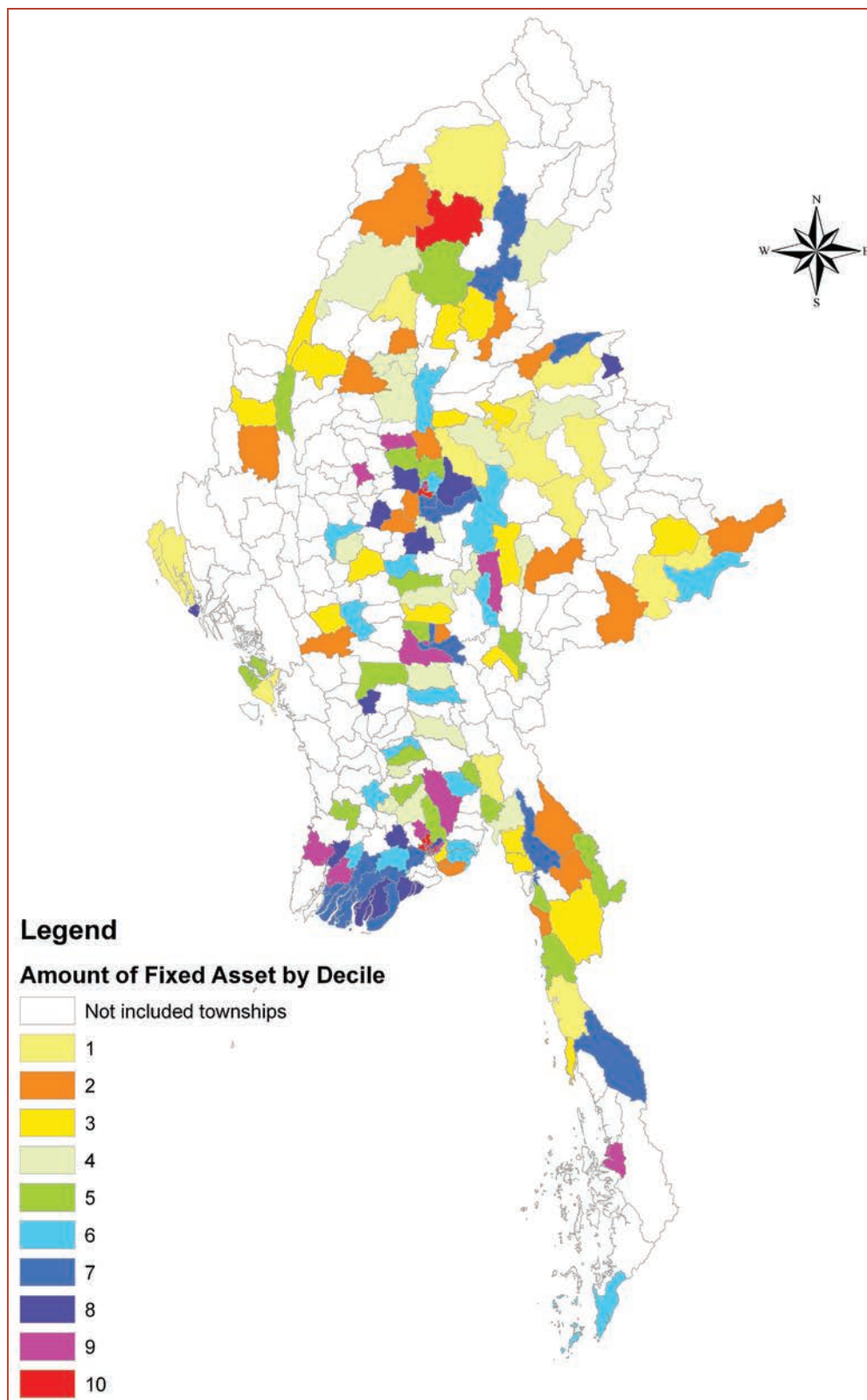
Decile	1	2	3	4	5	6	7	8	9	10
Total asset in Million Kyats	0-262	287 - 728	799 - 1794	1798 - 2474	2623 - 4425	4436 - 7179	7333 - 10912	10961 - 17921	17954 - 29219	30026 - 867148

31

Map of the distribution of new and starting firms according to township

Distribution of New / Starting Firms in Myanmar

Legend

New/ Start Firms

- 0
- 1- 10
- 10 - 25
- 25 - 50
- >50
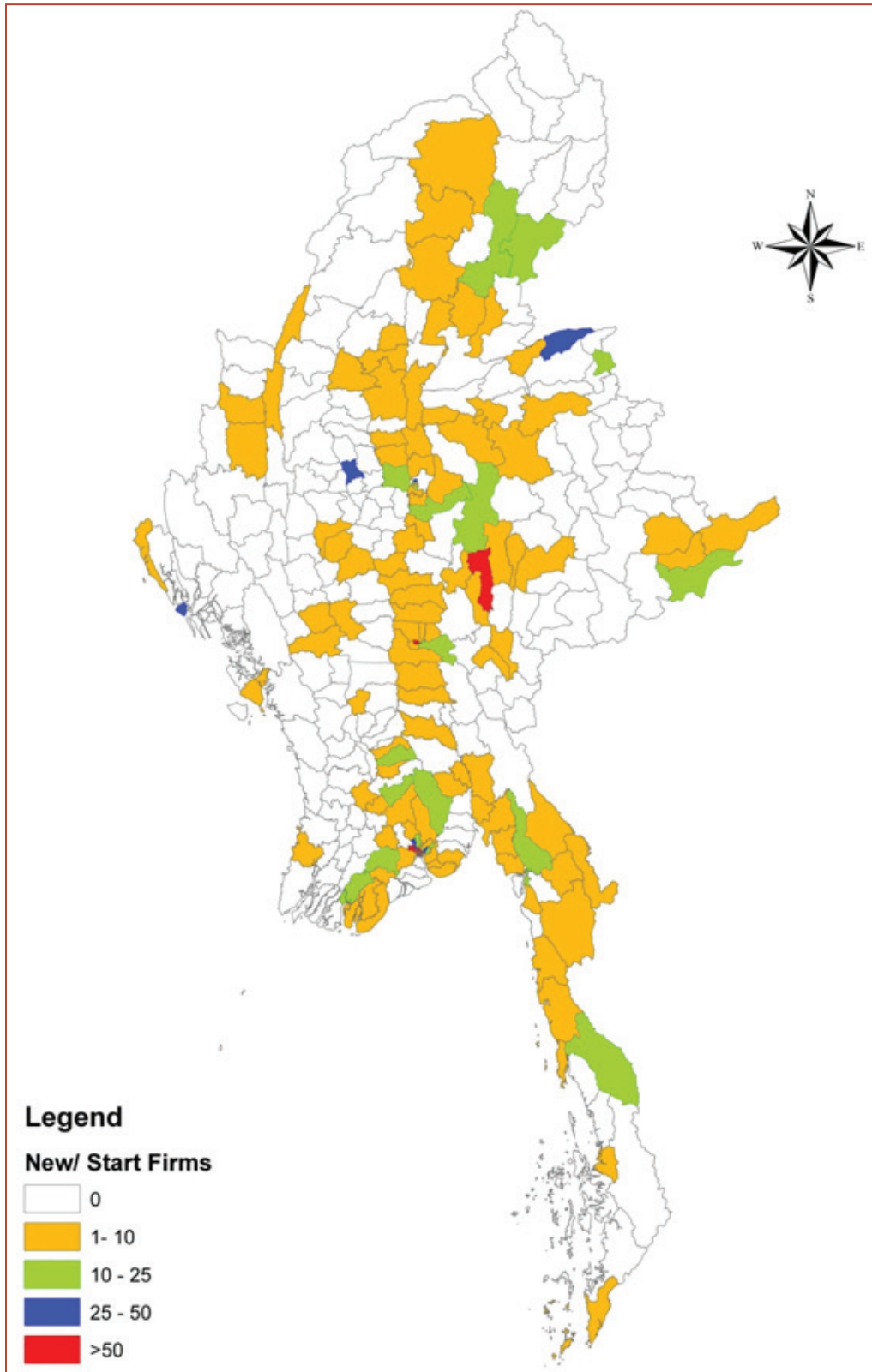
Distribution of Closed Firms in Myanmar

Legend

Closed Firms

☐	0
■	1 - 25
■	25 - 50
■	50 - 100
■	100 - 200
■	200 - 300
■	> 300

Annex 2: Sample of questionnaire in English

Ministry of National Planning and Economic Development
Planning Department
Preliminary Survey of Registered establishments /enterprises

Code

1. Name of Establishment/Enterprise and Location
   (A0) Serial Number
   (A1) State/Region
   (A2) District
   (A3) Township
   (A4) Urban/Rural(1. Urban 2. Rural)
      (Use codes in Annex 1 for states/regions, district, township)
   (A5) Telephone Number
      (1.1) Name of owner
      (1.2) Name of Establishment/Enterprise
      (1.3) Address of Establishment/Enterprise
         (Fill Complete Address)

2. Establishment/Enterprise existence (circle)
   (1. Operating 2. closed)
   If (2) Stop

3. Type ofestablishment (Circle relevant number)
   (1. single-establishment enterprise   2. Multiple establishment enterprise)
   (3.1) If single-establishment, circle (1) and continue question (4) *(If Head Quarter is located in other area, Please send the questionnaire to Head Quarter)*
   (3.2) If multiple-establishment enterprise, circle (2) and enter number of establishments
   get a copy or copy a list of establishments under this enterprise
   in the attached sheet starting from Head Quarter) and continue question (4)

4. Type of economic activities of this establishment (MSIC 2 digits code)
   (4.1) Name of main product/Service and economic activity
   (4.2) Name of secondary product/Service and economic activity

5. Present Fixed Asset value (Lakh Kyats)
   (Building, machinery, office equipment etc. as of 31 March 2013)

6. Total Sales/Revenue (2012-13 Financial year)(Lakh Kyats)

7. Total Sales/Revenue (2011-12 Financial year)(Lakh Kyats)

8. Total employees (as of 31 March 2013)
   (8.1) Employee
   (8.2) Family Worker*
   (8.3) Total employees

(*A family member work more than 1/3 of normal working hours can be classified as family worker)

Name of Enumerator   Township Supervisor
Date: Date:

Myanmar economy has an important potential of growth based in activities related both to the domestic as well to export markets. They can be led by the private sector, in the direction that National Policies require. However, the mere "invisible hand" of the market doesn't suffice to take full advantages of the potential in a way that could benefit wider sectors of the Myanmar population, with a perspective of inclusive growth.

> **The "One Pager Business Census" (OPBC) of Myanmar is the first attempt to consolidate and enumerate the registered enterprises that operate in the country.**

UNDP Myanmar

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