# Measuring the Contribution of the Informal Sector to the Philippine Economy: Current Practices and Challenges*1*

by

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## Abstract

In the Philippines, demand for a regular estimate of the contribution of the informal sector to the economy is high. Thus, in 2002 and 2003, the highest statistical policy making body of the Philippines then , already provided the official conceptual and operational definitions of  "informal sector". Further, it provided clear criteria for identifying those included in informal sector and listed the exclusions. Various censuses and surveys have then been regularly conducted to provide the data sources for measuring the informal sector. However, since the data sources have not been enough to provide the estimation based on official definition, the Philippine Statistics Authority (PSA), the statistics office of the Philippines, has been reporting on the contribution of the unorganized sector to the economy. The unorganized sector refers to the sector not covered by establishment surveys of the Philippine Statistical System (Virola and de Perio 2000).The report on unorganized sector is based on an indirect estimation using the Labor Input Method as suggested by Humans and Mehran(1989) .

The following is a report within a 10-year gap.

**Share of the Unorganized Sector to nominal GDP
by Major Industry, 2006 and 2016, Philippines**

| Sector | 2006 | 2( |
|--------|------|----|
| Agriculture | 67.1 | 9 |
| Industry | 22.4 | 3 |
| Services | 41.6 | 2 |
| Total | 39.1 | 3 |

Source: Philippine Statistics Authority

Latest efforts of the PSA for better measurement of the informal sector are: the 2018 listing of   establishments which produced the latest distribution of establishments by formal/informal sector , by sector, by region; plans for a riders in the Labor Force Survey to capture various areas of informality.This paper shall discuss the current methodology for capturing the informal sector and shall present efforts on providing more new data for enhancing the methodology.

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Keywords: PSA, informal sector, unorganized sector, Labor Input
 Method

In the Philippines, demand for a regular estimate of the contribution of the informal sector to the economy is high. Thus, in 2002 and 2003, the official conceptual and operational definitions of "informal sector" were adopted. However, since the data sources have not been enough to provide the estimation based on official definition. Thus, reporting has been on the contribution of the unorganized sector to the economy. The unorganized sector refers to the sector not covered by establishment surveys of the Philippine Statistical System (Virola and de Perio 2000).The report on unorganized sector is based on an indirect estimation using the Labor Input Method as suggested by Humans and Mehran(1989) . This paper shall discuss the current methodology for capturing the unorganized sector and shall present efforts on providing more new data for enhancing the methodology.

## 1. Framework

One important milestone on informal sector statistics was in 2002 and 2003 when the National Statistical Coordination Board, the highest statistical policy making body of the Philippines then, passed two resolutions: one, approving the official definition of the informal sector for the Philippines and ,another, adopting  a set of criteria for identifying the

informal sector.

Operational Definition

For statistical purposes, the informal sector refers to household unincorporated enterprises which consists of both informal own-account enterprises and enterprises of informal employers. Informal own–account enterprises are household unincorporated enterprises owned and operated by own-account workers, either alone or in partnership with members of the same or other households which may employ unpaid family workers as well as occasionally/seasonally hired workers but do not employ employees on a continuous basis. Enterprises of informal employers are household unincorporated enterprises owned and operated by own-account workers, either alone or in partnership with members of the same or other households which employ one or more employees on a continuous basis.

Particular cases that are excluded are: corporations, quasi-corporations, units with ten or more employees, corporate farms, commercial livestock raising and commercial fishing.

The identified set of criteria as part of the operational definition of the Informal Sector for adoption by all concerned government agencies are:

a.Enterprise Ownership  - Household;

b.Legal Organization    - Household enterprises which refers to unincorporated enterprises owned by household, are units engaged in the production of goods/services that are not constituted as legal entities independent of the households or the household members that own them;

c.Type of Accounts -  No complete set of accounts that will distinguish production activities, flows of income and capital between the households and the enterprises

d.Characteristics Relative to Employment

Informal own-account enterprises – household enterprises owned and operated by own-account workers, either alone or in partnership with members of the same or other households, which may employ contributing family workers and employees on an occasional basis, but do not employ employees on a continuous basis;

Enterprises of Informal Employers - household enterprises owned and operated by employers,either alone or in partnership with member of the same or other households, which employ one or more employees on a continuous basis;

e. Product Destination – at least some market; hence not entirely for market output

## 2. Industries identified with unorganized

Various censuses and surveys have been regularly conducted to provide the data sources for measuring the informal sector. However, since the data sources have not been enough to provide the estimation based on official definition, the Philippine Statistics Authority (PSA), the statistics office of the Philippines, has been reporting on the contribution of the unorganized sector to the economy. The unorganized sector refers to the sector not covered by establishment surveys of the Philippine Statistical System (Virola and de Perio 2000). The report on unorganized sector is

based on an indirect estimation using the Labor Input Method as suggested by Humans and Mehran(1989) .

In capturing the unorganized, the following are described under various industries:

a.Agriculture, Hunting, Forestry and Fishing (AHFF)

The unorganized sector in agriculture includes activities undertaken by household such as planting, harvesting, hauling, grading and packing of agricultural crops; rearing of farm animals; and the production of its by-products such as milk, cheese and eggs.    It also covers production of agriculture-based products such as wine, vinegar, copra, among others. Although there are an increasing number of corporate farms in the country, most of the agricultural activities are done by households.

Unorganized fishing activities cover mostly municipal fishing and gathering of seashells, mollusks, seaweeds and other fishery products.

Unorganized sector in forestry includes own-account activities such as logging, afforestation/reforestation, on-farm charcoal making and gathering of firewood and other forestry products.

b.Mining and Quarrying (MAQ)

The unorganized activity in mining covers the output of gold panning activities that are not sold to the Bangko Sentral ng Pilipinas (BSP), the central bank of the Philippines. It also includes stone quarrying and mining of other non-metallics.

c.Manufacturing (MFG)

The conceptual coverage of the unorganized sector in manufacturing is described as the manufacture of consumer goods by household enterprises. These are commonly found in food manufacturing (meat

processing, home baking, milk, and other dairy products); textile (hand weaving, needlework, knitting, smocking, and subcontracting of garments manufacturing); woods; furniture; publishing and printing; leather; chemicals; non-metallic mineral products; metal products; and miscellaneous manufacturing (e.g. toys).

d. Construction (CNS)

The unorganized activity in construction covers those produced by the owner-occupiers and the household unincorporated enterprises in producing housing services such as minor repairs and maintenance.

e. Electricity, Gas and Water Supply (EGWS)

The unorganized sector in EGWS includes the household use of tubed/piped deep and shallow wells.

f. Transport, Storage and Communication (TSC)

The unorganized sector in TSC includes jeepney, tricycle, pedicab, and unregistered commuter vehicles for the public; school bus services; and pump boat operations.

g. Trade and Repair of Motor Vehicles, Motorcycles, Personal and Household Goods (TRD)

The unorganized sector of TRD includes selling in household-operated sari-sari (variety) stores; selling raw and cooked foods by households either in their homes or on the streets; wholesale and retail of vegetables, rice, livestock, poultry and other agricultural products by households or small scale establishments; repair of motor vehicles; and personal and household goods by individual shop-owners in the premises of their homes or on the streets.

h. Financial Intermediation (FIn)

The unorganized activity in financial intermediation includes money-lending

activities under non-bank financial intermediation such as "5-6" lending ( lending operations with exorbitantly high surcharges).

i.Real Estate, Renting and Business Activities (RERBA)

Components representing the unorganized sector of RERBA are the letting and leasing operations of the households (room and board, room for rent, bed space); ownership of dwellings; services of sub-agent for real estate, among others.

j.Other Services (OS)

The unorganized sector in OS includes eateries ("carinderia") operations, cooked food street vending (commonly, fish ball, beverages, banana barbecue, peanuts, etc.); home-service beauticians and barbers shop operations, home-based tutorial services, household help services, and other service activities.

## 3. Data and Data Sources

The estimation of the unorganized sector relies primarily on the data from the following existing censuses and surveys and administrative-based data systems:

***Census of Philippine Business and Industry (CPBI)*** is conducted by the PSA every five to six years, covering both the large and small establishments. For the unorganized activities of various sectors, Gross Output per worker and Intermediate Consumption ratios (ICr's) of small establishments are computed, which are used to establish the benchmark estimates for gross output, intermediate consumption and gross value added (GVA) for the unorganized activities.

***2000 Census of Population and Housing (2000 CPH)*** is the source of information on household access to deep and shallow wells which is used in deriving benchmark estimates for unorganized water sector.

***Annual Survey of Philippine Business and Industry (ASPBI)*** is annual

sample survey conducted by the PSA in between the census years. The ASPBI provides data on production, employment, cost, and investment of large and small establishments. In between census years, it is used in computing the ICr's of small establishments for various industries.

***Labor Force Survey (LFS)*** is a household-based survey conducted quarterly by the PSA. It is the official source of employment data by industry. LFS covers only the economically active population, 15 years old and over, whether employed or unemployed, who contribute to the production of goods and services in the country.

***Family Income and Expenditure Survey (FIES)*** is a triennial household survey conducted by the PSA. It provides data on rental income and expenditures on repairs and maintenance of housing unit that are used in estimating the unorganized GVA of real estate and construction sectors.

***Census of Agriculture and Fisheries (CAF)*** is a household based census conducted by the PSA to provide data on area planted/harvested yield, etc. This census is used to draw up the frame for agricultural surveys. The parameters for the unorganized horticulture activities are derived from the CAF.

***Administrative-based data*** are also utilized in the estimation of the unorganized sector such as data on the forest charges from the Forest Management Bureau (FMB), cost of hog production from the Bureau of Animal Industry (BAI), cost of coconut production from the Philippine Coconut Authority (PCA), irrigation fees from the National Irrigation Administration (NIA), number of sugar planters from the Sugar Regulatory Administration (SRA), reported output of gold panning from the Bangko Sentral ng Pilipinas (BSP), number of professionals by type from the Professional Regulation Commission (PRC), income data from the Bureau of Internal Revenue (BIR), prices of waters from the Local Water Utilities Administration (LWUA), and the gold panning data from the Bangko Sentral ng Pilipinas, published by the Mines and Geosciences Bureau (MGB).

Other surveys used in the estimation of the unorganized sector are: Palay and Corn Production Survey, Crops Production Survey, and Livestock and Poultry Survey, Survey of Commercial and Municipal Fishing of the PSA and Survey of Jeepney Operators of the Department of Transportation and Communications (DOTC).

## 4. Estimators

In estimating the Gross Value Added in each sector, an indirect estimation approach (using the Intermediate Consumption ratio of the small establishments) is adopted based on the existing available data series as shown below:

$$GVA_i = O_i * (1-ICR_{SE})$$

*where:*

$GVA_i$ = gross value added, unorganized, of sector i

$ICR_{SE}$ =intermediate Consumption ratio of small
        establishments

*General Method in estimating the Gross Output*

The gross output of the unorganized sector is generally estimated by multiplying the difference between the labor force employment data and the employment data from the establishment survey by the gross output (GO) per worker of small establishments. It is assumed that the GO per worker of small establishments approximates that of the unorganized production units.

$$E_i = E_{LFS} - E_{ES}$$
$$O_i = E_i * OPW_{SE}$$

where:

| | | |
|---|---|---|
| $E_{LFS}$ | = | employment from the Labor Force Survey |
| $E_{ES}$ | = | employment from the establishment survey |
| $O_i$ | = | output, unorganized, of sector I |
| $OPW_{SE}$ | = | output per worker of small establishments |

This method is adopted for the following industries: commercial fishing,

forestry, manufacturing, mining and quarrying except gold panning, trade, transport, financial intermediation, real estate except ownership of dwellings and other services except professional services. Computation of the GVA using the ICr of the small establishments is adopted in all sectors.

*Sector specific methods in estimating the Gross Output*

a. Agriculture, Hunting, Forestry and Fishing

Using PSA data, which are assumed to be household-based, the Gross Output (GO) is computed as follows:

$$GO = \sum_{\forall i_s}(P_i \times Q_i)$$

where:

GO = Gross Output of the unorganized activities at current

prices of the $i^{th}$ commodity;

$Q_i$ = volume of production the $i^{th}$ commodity; and

$P_i$ = average farmgate price the $i^{th}$ commodity.

Intermediate consumption is based from the updated cost of production of agricultural commodities.

$$IC = \sum_{\forall ij_s}(GO_{ij} \times ICr_{ij})$$

where:

$IC$ = intermediate consumption of the unorganized activities;

$ICr_i$ = ratio of IC to the GO of the $i^{th}$ commodity based from the cost of production and result of the ASPBI/CPBI;

$GO_i$ = gross output at current prices of the $i^{th}$ commodity.

## b. Mining and Quarrying

The estimation of panned gold and coal is the same as the organized activities in Mining and Quarrying and follows the general formula:

$$GO = Q * P$$

where:  $GO$ = gross output
$Q$ = quantity or volume of production by commodity
$P$ = unit price of commodity
$IC$ = Intermediate Consumption (includes fuel, tools, chemicals, transportation expenses, among others)

For Stone quarrying, clay and sandpits, except coal, and other non-metallics, based on expert opinion from the MGB, 20% of total production from these activities comes from unorganized activities.

## c. Construction

Actual levels of expenditure of household on minor repairs and maintenance from the FIES were adopted in estimating the unorganized activity in construction. However, for years when FIES is not available, the unorganized sector is estimated using the growth of the housing stocks from Ownership of Dwelling to extrapolate the level of the minor repairs and maintenance.

For years when *MRM* are not available, *MRM* is estimated as follows:

GO - MRM

where:

$$MRM_{t+1} = MRM_t \ x \ \frac{HS_{t+1}}{HS_t}$$

GO= gross output of unorganized activities in construction
ICr    = intermediate consumption ratio of the ownership
          of dwellings   based from FIES

MRM = expenditure of household on minor repairs and
            maintenance

HS    = housing stocks from ownership of dwellings

t = year with available FIES

d. Electricity, Gas and Water Supply

The gross output for the unorganized sector in the water sub-industry is computed as follows:

$$GO = V * P$$

where:  P        = estimated price of water extracted from
                    shallow well per cubic meter from LWUA

        Q = volume of water consumption of the unorganized
            sector
        Q = $p * N * C$

            *where:*

$p$ = proportion of households using own use tubed/piped deepwell, shared tubed/piped deepwell and tubed/piped shallow well (base from 2000 CPH)

$N$ = total number of population

$C$ = average water consumption per capita

e. Real Estate, Renting, and Business Activities

All sub-industries of RERBA follow the general method in estimating the gross output of the unorganized sector except for Ownership of Dwellings, which follows the following formula:

$$GO_{t+1} = GO_t \ x \ \frac{HS_{t+1}}{HS_t}$$

Where : GO= gross output of ownership of dwellings

HS = housing stocks from ownership of dwellings

t = year

## 5. Some Results

Table 1 shows that, in the 10-year gap from 2006 to 2016, the share of the unorganized sector in agriculture and in industry to nominal GDP have grown. Only in Services, has the unorganized sector's contribution shrinked.

Table 1. Share of the Unorganized Sector to nominal GDP by Major Industry, 2006 and 2016, Philippines

| Sector | 2006 | 2016 |
|---|---|---|
| Agriculture | 67.1 | 96.4 |
| Industry | 22.4 | 31.4 |
| Services | 41.6 | 26.4 |
| Total | 39.1 | 34.7 |

Source: Philippine Statistics Authority

Figure 1 and Table 2, on the other hand, show the increasing gap between total organized and organized sectors in the Philippines. The source is mainly from the Services sector.

Figure 1.Gross Domestic Product by Organized and Unorganized, 1998-2018, at current prices 9 in Million Pesos)
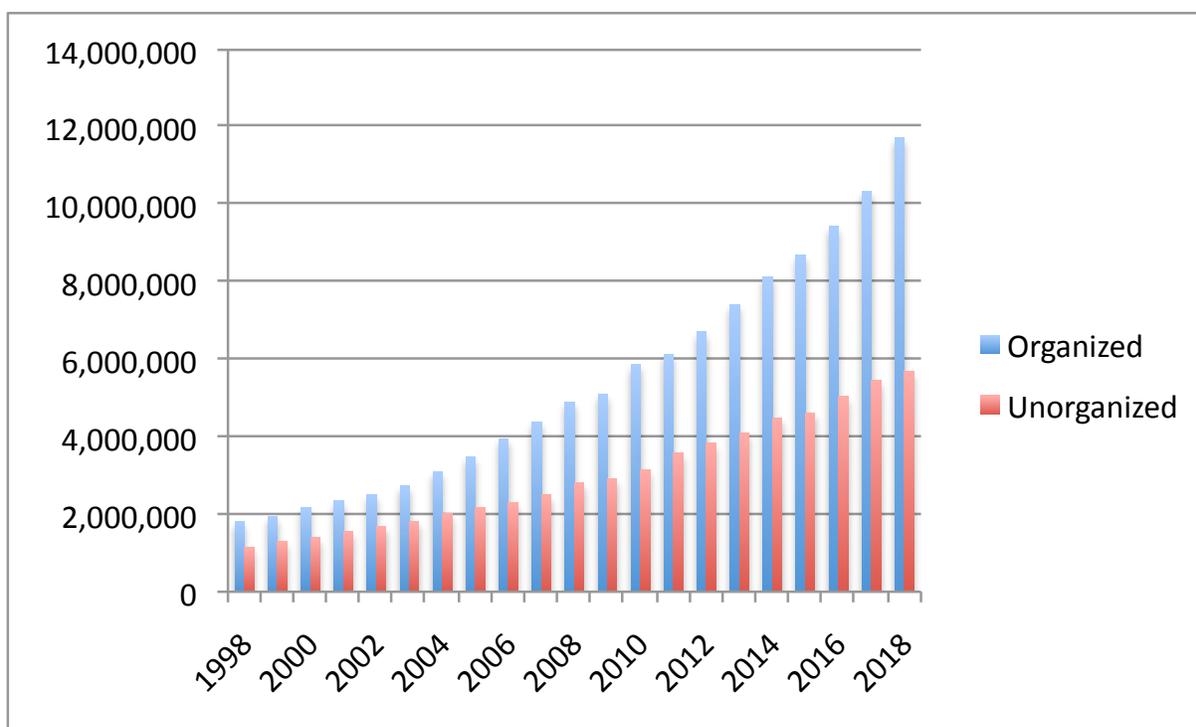
Table 2. Gross Domestic Product by Organized and Unorganized, 1998-2018, at current prices 9 in Million Pesos)

| Year | Organized | Unorganized | Total |
|------|-----------|-------------|-------|
| 1998 | 1,803,264 | 1,149,498 | 2,952,762 |
| 1999 | 1,938,268 | 1,305,930 | 3,244,197 |
| 2000 | 2,180,792 | 1,399,922 | 3,580,714 |
| 2001 | 2,342,641 | 1,546,161 | 3,888,801 |
| 2002 | 2,514,345 | 1,684,000 | 4,198,345 |
| 2003 | 2,728,477 | 1,819,624 | 4,548,102 |
| 2004 | 3,107,273 | 2,013,162 | 5,120,435 |
| 2005 | 3,496,631 | 2,181,118 | 5,677,750 |
| 2006 | 3,956,009 | 2,315,148 | 6,271,157 |
| 2007 | 4,394,919 | 2,497,803 | 6,892,721 |
| 2008 | 4,908,713 | 2,812,190 | 7,720,903 |
| 2009 | 5,110,542 | 2,915,601 | 8,026,143 |
| 2010 | 5,863,111 | 3,140,369 | 9,003,480 |
| 2011 | 6,129,505 | 3,578,826 | 9,708,332 |
| 2012 | 6,710,249 | 3,850,840 | 10,561,089 |

| | | | |
|---|---|---|---|
| 2013 | 7,427,156 | 4,111,255 | 11,538,410 |
| 2014 | 8,140,355 | 4,493,833 | 12,634,187 |
| 2015 | 8,694,526 | 4,627,515 | 13,322,041 |
| 2016 | 9,432,635 | 5,047,714 | 14,480,349 |
| 2017 | 10,346,601 | 5,460,995 | 15,807,596 |
| 2018 | 11,735,905 | 5,690,297 | 17,426,202 |
| Source: Macroeconomic Accounts Services, Philippine Statistics Authority | | | |

## 6.Moving Forward: Improving Data Availability

In 2018, the PSA updated its List of Establishments. It was a comprehensive nationwide conduct of updating of the Statistical Business Register (SBR) using android tablet-based application. It involved:
-door-to-door canvassing
-updating of the operation status and basic characteristics of the establishments listed in the SBR
-listing/adding of records of new establishments or those which are not yet listed in the SBR.

Based on the official definition and criteria set in for operationalizing the informal sector in 2002 and 2003, the informal sectors were defined as those establishments classified as :

LO=1 (Single Proprietorship) and

EO=1(Single Establishment) and

with Total Employment of less than 10

as listed in the LE.
Based on the preliminary results of the 2018 ULE:

There are a total of 1,001,608 records of establishments in the Preliminary 2018 LE as of 1 February 2019. Of this number, 68.7% are informal establishments.There are a total of 1,001,608 records of establishments in the Preliminary 2018 LE as of 1 February

Villanueva and Balisacan ( 2019) did a recent assessment of the compilation of national accounts in relation to capturing non-observed economy and reported on the following observations by industry.

| Industry | Employment not in Listing of Establishments | Percentage of small-sized establishment |
|---|---|---|
| Agriculture, forestry and fishing | 98.2% | 74.0% |
| Water supply; sewerage, waste management | 98.3% | 53.1% |
| Wholesale and Retail Trade | 80.2% | 94.4% |
| Arts, entertainment and recreation | 76.4% | 93.0% |
| Other service activities | 92.7% | 96.1% |

Source: Philippine Statistics Authority

PSA also added questions in its April 2018 LFS to capture informal employment of household members. Employment in the informal sector includes all jobs in informal sector enterprises or all persons who, during a given reference period, were employed in at least one **informal sector**

**enterprise**, irrespective of their status in employment and whether it was their main or a secondary job.Informal sector enterprises are private unincorporated enterprises (excluding quasi-corporations), i.e. enterprises owned by individuals or households that are not constituted as separate legal entities independently of their owners, and for which no complete accounts are available that would permit a financial separation of the production activities of the enterprise from the other activities of its owner(s). Private unincorporated enterprises include unincorporated enterprises owned and operated by individual household members or by several members of the same household, as well as unincorporated partnerships and co-operatives formed by members of different households, if they lack complete sets of accounts.

For the LFS, the following questions were added for the members of the household being interviewed:

a.What is the legal status/organization of the enterprise you own or where you work?
b.How does your business/enterprise maintain its records or account?
c.Does the enterprise you own or where you work sell or barterits goods/services?Yes/No

The result indicated that for said LFS round, 62.8% of employed persons, 15 years old and over, are in the informal sector. By sex, 66.7% of males and 56.4% of females are in the informal sector.

Table 3 below provides more details.

Table 3.Employed Persons 15 Years Old and Over, thousands.  by Employment Status and Sex, Philippines , April 2018

| Employment Status | Sex | | | | | |
|---|---|---|---|---|---|---|
| | Both Sexes | | Male | | Female | |
| | Number | Percent | Number | Percent | Number | Percent |
| Philippines | 40,896 | 100.0 | 25,307 | 100.0 | 15,589 | 100.0 |
| Formal | 15,230 | 37.2 | 8,438 | 33.3 | 6,792 | 43.6 |
| Informal | 25,667 | 62.8 | 16,870 | 66.7 | 8,797 | 56.4 |
| **Wages Employee** | 26,079 | 63.8 | 16,748 | 66.2 | 9,332 | 59.9 |
| Formal | 6,305 | 15.4 | 3,407 | 13.5 | 2,898 | 18.6 |
| Informal | 19,774 | 48.4 | 13,341 | 52.7 | 6,433 | 41.3 |
| Worked for Private Establishment | 20,559 | 50.3 | 14,730 | 58.2 | 5,829 | 37.4 |
| Formal | 4,550 | 11.1 | 2,630 | 10.4 | 1,920 | 12.3 |
| Informal | 16,009 | 39.1 | 12,100 | 47.8 | 3,909 | 25.1 |
| Worked for Gov't/Gov't Corporation | 3,451 | 8.4 | 1,604 | 6.3 | 1,847 | 11.9 |
| Formal | 1,621 | 4.0 | 738 | 2.9 | 883 | 5.7 |
| informal | 1,831 | 4.5 | 866 | 3.4 | 965 | 6.2 |
| Worked for Private Household | 1,923 | 4.7 | 317 | 1.3 | 1,606 | 10.3 |
| Formal | 117 | 0.3 | 28 | 0.1 | 89 | 0.6 |
| Informal | 1,806 | 4.4 | 289 | 1.1 | 1,517 | 9.7 |
| Worked with pay in family owned Busine | 146 | 0.4 | 96 | 0.4 | 50 | 0.3 |
| Formal | 17 | 0.0 | 10 | 0.0 | 7 | 0.0 |
| Informal | 129 | 0.3 | 86 | 0.3 | 43 | 0.3 |
| Self Employed | 11,140 | 27.2 | 6,577 | 26.0 | 4,563 | 29.3 |
| Formal | 7,910 | 19.3 | 4,303 | 17.0 | 3,608 | 23.1 |
| Informal | 3,230 | 7.9 | 2,274 | 9.0 | 956 | 6.1 |
| Employer | 1,517 | 3.7 | 1,120 | 4.4 | 397 | 2.5 |
| Formal | 1,014 | 2.5 | 728 | 2.9 | 286 | 1.8 |
| Informal | 502 | 1.2 | 392 | 1.5 | 111 | 0.7 |
| Contributing Family Worker (Unpaid) (Inforn | 2,160 | 5.3 | 863 | 3.4 | 1,297 | 8.3 |

*Source: Philippine Statistics Authority, April 2018 Labor Force Survey*

Results of the 2018 List of Establishments and April 2018 LFS with rider questions on informal sector have not yet been used in the estimation of the share of the organized and unorganized to the Philippine economy.

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