

# Labor Informality in Curaçao: Analysis from the Labor Force Survey 2014–2015

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## Abstract

Labor informality comprises persons owning informal businesses as well as people who work under informal conditions in formal or informal businesses. The size of labor informality in Curaçao, measured through labor force surveys, was 32.5 percent (95% confidence interval [CI] 30.6–34.4%) of the employed population in 2014 and 32.6 percent (95% CI 30.6–36.0%) of the employed population in 2015. The proportion of men and women engaging in labor informality was fairly equal in both years. The median age of those engaging in labor informality was lower than those working under formal conditions, but this difference in age was statistically not significant. Furthermore, data of the LFS showed that the majority of the employed youth population (15–24 years); the majority of the persons who have an elementary education as their highest level of education; the majority of the persons having an elementary occupation (unskilled workers); and the majority of persons who earned NAf. 1,000 (Netherlands Antillean guilder) per month or less worked under informal conditions in 2014 and 2015.

## Introduction

*In both developing and developed countries the modern or formal sector is being transformed by global integration and shifts in economic policies (ILO, 2013). Non-standard contractual arrangements or informal jobs are replacing full-time employment with formal working arrangements. In Curaçao, the number of the employed population increased with 4.3 percent in 2015 in comparison to 2014 (Jansen, CBS 2016). The largest increment in employment occurred among young people (15-24 years) and the increase was the greatest for the flexible economic positions, such as workers in temporary services and other types of flexible work arrangements, such as workers through employment agencies.*

*Labor informality compromises both persons owning informal businesses as well as people who work under informal conditions in formal or informal businesses (Husmanns, 2004a). Informal employment plays an important role for employment creation, income generation and poverty reduction in many countries (Husmanns, 2004b). According to the International Labour Organization (ILO), labor informality accounts for a substantial portion of employment (ILO, 2013). Therefore, development of statistics on labor informality could help to give more insight in labor statistics. Possibly, it could serve as indicative information for the imbalance between economic growth and employment/unemployment which has been occasionally visible in Curaçao (Jansen, Varlack, 2017 & Hek, Dare 2016).*

*Lake (2007) found that in 2005, 21 percent of the employed population in Curaçao engaged in labor informality. Furthermore, she found that more women were working under informal conditions in comparison to men and that more than three quart of the workers engaging in labor informality were 35 years and older. In this article, the size of labor informality in Curaçao in 2014 and 2015 and the characteristics of workers engaging in this type of labor will be presented.*

## Methodology

Statistics on the size- and characteristics of labor informality were produced by using data collected through the Labor Force Survey (LFS) 2014 and 2015. The methodology of the LFS has been described in detail in the report “Supply side of the labor market of Curaçao: Labor Force Survey 2014–2015 (Jansen, CBS 2016). In short, the LFS is a sample survey held among households in Curaçao in the months September and October and the study population includes non-institutionalized men and women residing for three months or more – or planning to stay for three months or longer – on the island. The results of the LFS are weighted in order to make statements about the entire non-institutionalized population aged 15 years and older (also known as the working-age population).

The use of LFS or other household surveys, establishment surveys or censuses, or mixed surveys (combination of both household and establishment survey) proved to yield valuable information for measuring informality in different countries (ILO, 2013). Questions about e.g. whether a business is registered at the Curaçao Chamber of Commerce and Industry (KvK) or a worker have a written contract of employment were used to determine if a person works informally or owns an informal business.

In the LFS 2014 and 2015, one type of informal business and three types of informal employment in formal or informal businesses were measured (Box 1). For more information on the components of these types of informality, please see the section definitions.

### **Labor Informality**

#### **Informal business (enterprises)**

1. Own-account workers, employers in the informal sector

#### **Informal employment**

2. Employees in the formal- or informal sector who have informal employment
3. Contributing family workers in the formal- or informal sector
4. Employees in households who have informal employment

#### **Box 1. Components of labor informality**

Descriptive analyses (proportions) were used to estimate the size of labor informality. To identify characteristics of workers engaging in labor informality, Pearson’s chi-square and independent samples tests (median test, Mann-Whitney *U* test, and Kruskal-Wallis test) were used. Confidence Intervals (CI) and Inter-Quartile Ranges (IQR) were calculated to indicate the precision of the estimates. Complex sample analyses were used in order to take into account weighting procedures and all analyses were performed using the Statistical Package for the Social Sciences (SPSS) version 20 and RStudio.

## Definitions

Components of labor informality:

1: Own account workers and employers employed in their own informal sector. Enterprises that are not registered at the Curaçao Chamber of Commerce and Industry (KvK), or who do not have a vendor permit, or enterprises that are in the process of registration at the KvK, but do not have some form of bookkeeping.

2: Employees in formal- or informal enterprises without a formal contract (employment arrangement) with employer, or who do not receive a salary slip, or who could be dismissed by the employer without dismissal arrangements.

3: Contributing family workers in formal- or informal enterprises. The informal nature of their job is due to the fact that contributing family workers usually do not have explicit, written contracts of employment, and that their employment is usually not subject to e.g. labor legislation, social security regulations (ILO, 2013).

4: Employees holding informal jobs as domestic workers employed by households. According to the 17<sup>th</sup> International Conference of Labor Statisticians (ICLS) guidelines, employees are considered to have informal jobs if their employment relationship is, in law or in practice, not subject to national labor legislation, income taxation, social protection or entitled to certain employment benefits.

## **Results**

### Size of labor informality

The size of the employed population in Curaçao was 59,295 persons in 2014 and 61,823 persons in 2015 (Table 1). Of these employed populations, data about labor (in)formality were available for 56,531 persons in 2014 and 59,272 persons in 2015. The size of informality was 32.5 percent (95% CI 30.6–34.4) of the employed population in 2014 and 32.6 percent (95% CI 30.6–34.6%) of the employed population in 2015.

**Table 1. Informality among employed population in Curaçao by economic position, Sept.–Oct. 2014 and 2015**

| Economic position             | Total employed population |               | Employed population with data on (in)formality |               | Working under informal conditions |               | Percentage of informality |             |
|-------------------------------|---------------------------|---------------|--|---------------|-----------------------------------|---------------|---------------------------|-------------|
|                               | 2014                      | 2015          | 2014   | 2015          | 2014                              | 2015          | 2014                      | 2015        |
| Employer                      | 1,875                     | 1,104         | 1,264  | 1,104         | 98                                | 92            | 7.8                       | 8.3         |
| Self-employed                 | 4,681                     | 5,264         | 4,127  | 3,938         | 866                               | 614           | 21.0                      | 15.6        |
| Employee in permanent service | 37,063                    | 38,393        | 36,883   | 37,923        | 7,130                             | 7,439         | 19.3                      | 19.6        |
| Employee in temporary service | 7,496                     | 9,220         | 7,399  | 8,998         | 4,053                             | 4,462         | 54.8                      | 49.6        |
| Casual worker/freelancer      | 6,092                     | 6,511         | 6,092  | 6,350         | 5,593                             | 5,832         | 91.8                      | 91.8        |
| Other <sup>1</sup>            | 766                       | 958           | 766  | 958           | 623                               | 866           | 81.3                      | 90.4        |
| Unknown/not reported          | 1,322                     | 373           | -  | -             | -                                 | -             | -                         | -           |
| <b>Total</b>                  | <b>59,295</b>             | <b>61,823</b> | <b>56,531</b>                                  | <b>59,272</b> | <b>18,363</b>                     | <b>19,306</b> | <b>32.5</b>               | <b>32.6</b> |

<sup>1</sup> Other include e.g. trainee, workers through an employment agency, unpaid family worker

Table 1 show that the share of the employed population that works informally is the highest among casual workers/freelancers. In 2014 and 2015, about nine of every 10 persons (91.8%) who work as a casual worker or freelancer worked without a formal employment arrangement with their employer, or did not receive a salary slip, or could be dismissed by their employer without dismissal arrangements.

The lowest share of informality in 2015 was among employers and own-account workers. A total of 8.3 percent of employers and 15.6 percent of self-employed workers were not registered at the KvK, or did not have a vendor permit, or their enterprise were in the process of registration at the KvK, but did not have some form of bookkeeping at the moment of the LFS.

## **Characteristics of labor informality**

### *Gender*

The percentage of women working under informal conditions was slight higher than the percentage of men working under informal conditions in 2014 as well as in 2015 (Table 2). However, this difference in gender was statistically not significant in both years. In 2014, 34.0 percent (95% CI 31.4–36.8) of the employed women population engaged in labor informality, while 30.8 (95% CI 28.1–33.6) percent of the employed men population worked under informal conditions. In 2015, these figures were respectively 33.1 percent (95% CI 30.4–36.0%) and 32.0 (29.1– 35.0%) percent for women and men.

| Gender | 2014             |                   | 2015             |                   |
|--------|------------------|-------------------|------------------|-------------------|
|        | Formal (95% CI)  | Informal (95% CI) | Formal (95% CI)  | Informal (95% CI) |
| Men    | 69.2 (66.4–71.9) | 30.8 (28.1–33.6)  | 68.0 (65.0–70.9) | 32.0 (29.1–35.0)  |
| Women  | 66.0 (63.2–68.6) | 34.0 (31.4–36.8)  | 66.9 (64.0–69.6) | 33.1 (30.4–36.0)  |

CI = Confidence Interval

Furthermore, the distribution of gender among persons working under informal conditions was fairly equal as the distribution of gender in the Curaçao's population. This confirms the fact that there were no gender difference in the proportion of persons engaging in labor informality. Of the persons engaging in labor informality in 2015, 46.9 percent were men and 53.1 percent were women. The distribution of men and women in the Curaçao's population in 2015 were respectively 45.7 percent and 54.3 percent.

### *Age*

The median age of the employed population engaging in labor informality (2014: 42.0 years, IQR 32.0–52.0 years; 2015: 43.0 years, IQR 31.0–52.0 years) was lower than the median age of those working under formal conditions (2014: 45.0 years, IQR 35.0–53.0 years; 2015: 45.0 years, IQR 34.0–53.0 years). However, this difference in age was statistically not significant.

In 2014 and 2015, the greatest proportions of persons engaging in labor informality were in the age group 45–54 years (24.6% in 2014 and 26.1% in 2015; Figure 1)<sup>1</sup>. But note that also a high proportion of persons working under informal conditions in 2014 were in the age group 35–44 years (24.1%).

<sup>1</sup> In all figures in this article, the bars follow the sequence given in the legend on the right side of the figure. For instance in Figure 1, in 2014, in the category formal: the first bar represents the age group 15–24 years, followed by age group 25–34 year and so on. The last bar represents the age group 65+ years.

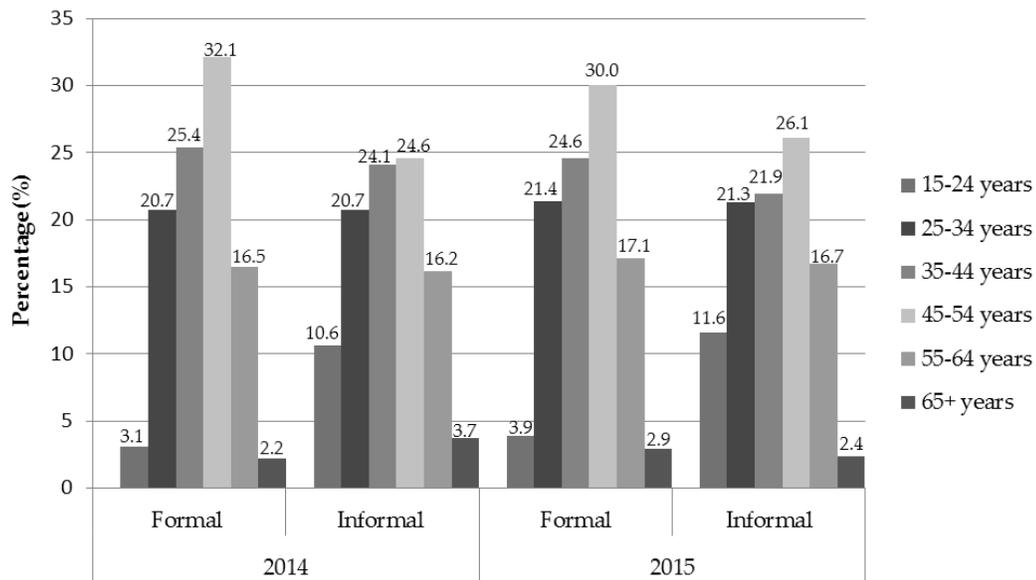


Figure 1. Percentage of formal- and informal sector by age groups

Table 3 presents the proportion of persons working under formal and informal conditions within a specific age group. The majority of the youth employed population (15–24 years) works under informal conditions, while for the other age groups, the majority of the employed population works under formal conditions. In 2014 and 2015, the proportion of the youth engaging in labor informality (2014: 62.5%, 95% CI 54.0–70.3; 2015: 59.2%, 95% CI 50.5–67.3) was significantly higher than the proportion of youth working under formal conditions.

**Table 3. Percentage of employed population working under formal and informal conditions by age group, Sept.–Oct. 2014 and 2015**

| Age group   | 2014             |                   | 2015             |                   |
|-------------|------------------|-------------------|------------------|-------------------|
|             | Formal (95% CI)  | Informal (95% CI) | Formal (95% CI)  | Informal (95% CI) |
| 15–24 years | 37.5 (29.7–46.0) | 62.5 (54.0–70.3)  | 40.8 (32.7–49.5) | 59.2 (50.5–67.3)  |
| 25–34 years | 67.5 (62.9–71.8) | 32.5 (28.2–37.1)  | 67.5 (62.6–72.0) | 32.5 (28.0–37.4)  |
| 35–44 years | 68.6 (64.4–72.6) | 31.4 (27.4–35.6)  | 69.9 (65.4–74.1) | 30.1 (25.9–34.6)  |
| 45–54 years | 73.0 (69.5–76.2) | 27.0 (23.8–30.5)  | 70.5 (66.7–74.0) | 29.5 (26.0–33.3)  |
| 55–64 years | 67.9 (63.6–72.0) | 32.1 (28.0–36.4)  | 68.1 (63.5–72.3) | 31.9 (27.7–36.5)  |
| 65+ years*  | 55.7 (44.9–66.0) | 44.3 (34.0–55.1)  | 72.0 (61.1–80.8) | 28.0 (19.2–38.9)  |

CI = Confidence Interval

\*Caution should be taken when interpreting these results, as the numbers in this age category are low. This is due to the fact that this age category is presented for the first time, as a result of changing policies on the age of retirement in Curaçao.

### Education

A great proportion of persons working under informal conditions had the first stage of the second level as their highest level of education (39.3% in 2014 and 37.6% in 2015), followed by those with a second stage of the second level of education (28.4% in 2014 and 31.1% in 2015). The first stage of the second level of education included 'VSBO', 'HAVO' years 1+2, and 'VWO' years 1+2 or any equivalent education, while the second stage of the second level of education included 'HAVO' years 3+4+5, 'VWO' years 3+4+5+6, 'SBO', 'MBO' or any equivalent education.

Table 4 presents the share of persons working under formal and informal conditions according to their highest level of education. The majority of the employed population who were following a current daytime education at the moment of the LFS in 2014 as well as in 2015 was working under informal conditions (68.2% in 2014 and 63.4% in 2015). This was also the case for those with an elementary education as their highest attained educational level. Further results in table 4 show that the percentage of the employed population engaging in informality decreased with increasing level of highest attained education. Among those with the highest attained educational level (third level), 16.7 percent and 15.6 percent worked under informal condition in 2014 and 2015, respectively.

| Education                               | 2014               |                    | 2015               |                    |
|---|--------------------|--------------------|--------------------|--------------------|
|   | Formal (95% CI)    | Informal (95% CI)  | Formal (95% CI)    | Informal (95% CI)  |
| Current daytime education <sup>1</sup>  | 31.8 (20.1 – 46.3) | 68.2 (53.7 – 79.9) | 36.6 (25.5 – 49.4) | 63.4 (50.6 – 74.6) |
| No education                            | --                 | --                 | 48.1 (28.8 – 68.0) | 51.9 (32.0 – 71.2) |
| Elementary <sup>1</sup>                 | 37.6 (29.8 – 46.0) | 62.4 (54.0–70.2)   | 39.3 (30.8 – 48.5) | 60.7 (51.5 – 69.2) |
| Second level, first stage <sup>1</sup>  | 61.2 (57.6 – 64.6) | 38.8 (35.4–42.4)   | 61.7 (57.9 – 65.4) | 38.3 (34.6 – 42.1) |
| Second level, second stage <sup>1</sup> | 71.4 (67.9 – 74.6) | 28.6 (25.4–32.1)   | 68.9 (65.2 – 72.4) | 31.1 (27.6 – 34.8) |
| Third level <sup>1</sup>                | 83.3 (80.0 – 86.2) | 16.7 (13.8 – 20.1) | 84.4 (81.0 – 87.4) | 15.6 (12.6 – 19.0) |

CI = Confidence Interval  
<sup>1</sup> Current daytime education = currently attending a daytime education  
Elementary education = e.g. 'funderend onderwijs, basisschool'  
Second level, first stage = VSBO, HAVO years 1+2, VWO years 1+2 or equivalent  
Second level, second stage = HAVO years 3+4+5, VWO years 3+4+5+6, SBO, MBO or equivalent  
Third level = HBO, WO, and postdoctoral or equivalent  
-- A distinction between the 'No education' and 'Unknown/not reported' categories was not possible in 2014. These percentages are therefore not presented.

### **Occupation**

The greatest share of the persons engaging in labor informality consisted of persons with an elementary occupation (unskilled workers) followed by service and sales workers (Figure 2). Of the workers engaging in labor informality in 2014, 25.1 percent comprised unskilled workers and 21.9 percent comprised service and sales workers. These figures were respectively 26.0 percent and 23.6 percent in 2015.

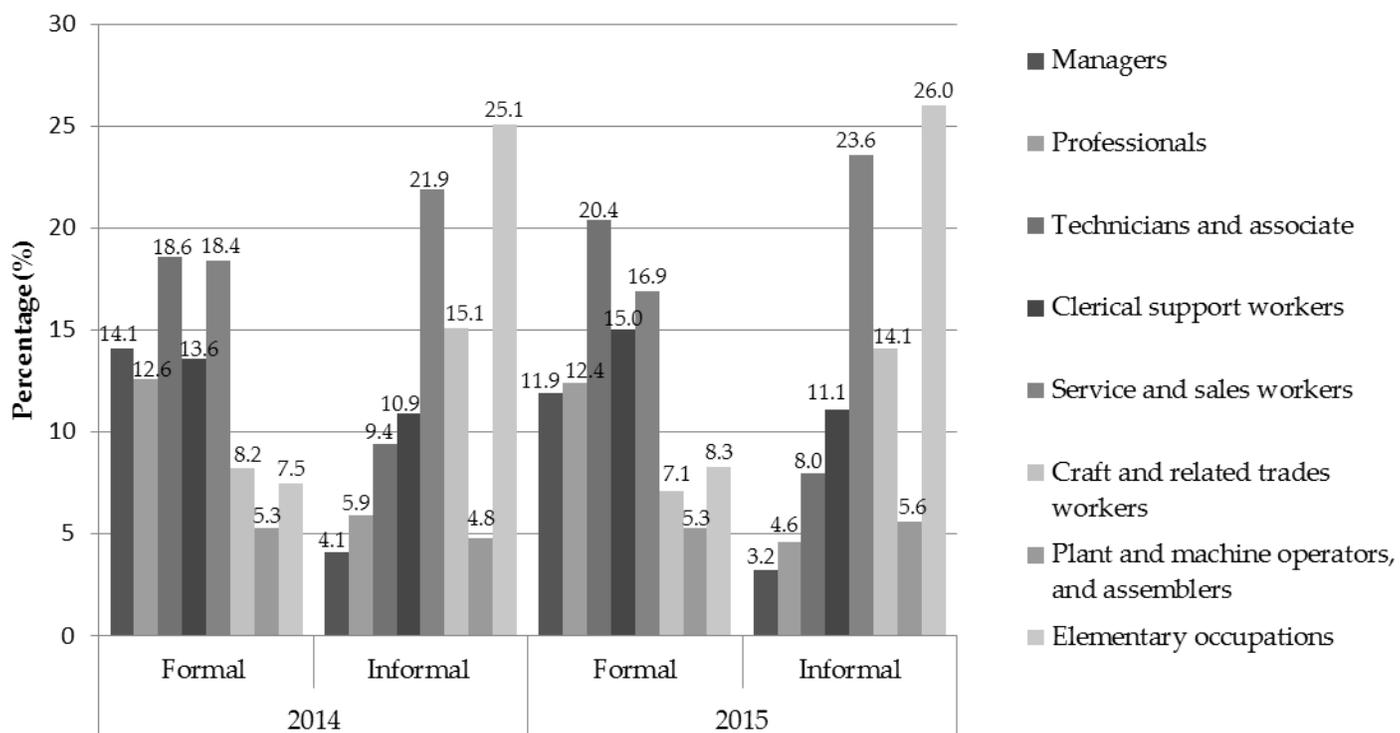


Figure 2. Percentage of formal- and informal sector by occupation

When looking at the developments within an occupation group, the majority of the persons with an elementary occupation worked under informal conditions (Table 5). In 2014, 61.7 percent of the unskilled workers engaged in labor informality, while in 2015 this figure was 60.3 percent. For the craft and related trades workers, about half worked informally in 2014 (47.0%) and 2015 (49.1%).

Table 5. Percentage of employed population working under formal and informal conditions by occupation, Sept.–Oct. 2014 and 2015

| Occupation   | 2014             |                  | 2015             |                   |
|--|------------------|------------------|------------------|-------------------|
|  | Formal (95% CI)  | Informal (95%CI) | Formal (95% CI)  | Informal (95% CI) |
| Armed forces                                       | --               | --               | --               | --                |
| Managers   | 87.7 (83.0–91.3) | 12.3 (8.7–17.0)  | 88.6 (82.8–92.6) | 11.4 (7.5–17.2)   |
| Professionals                                      | 81.6 (76.1–86.0) | 18.4 (14.0–23.9) | 84.7 (79.2–89.0) | 15.3 (11.0–20.8)  |
| Technicians and associate professionals            | 80.4 (75.9–84.3) | 19.6 (15.7–24.1) | 84.0 (79.6–87.6) | 16.0 (12.4–20.5)  |
| Clerical support workers                           | 72.2 (66.8–77.1) | 27.8 (22.9–33.2) | 73.6 (68.1–78.5) | 26.4 (21.5–31.9)  |
| Service and sales workers                          | 63.5 (58.9–67.9) | 36.5 (32.1–41.1) | 59.7 (54.7–64.5) | 40.3 (35.5–45.3)  |
| Skilled agricultural, forestry and fishery workers | --               | --               | --               | --                |
| Craft and related trades workers                   | 53.0 (46.6–59.4) | 47.0 (40.6–53.4) | 50.9 (43.7–58.1) | 49.1 (41.9–56.3)  |
| Plant and machine operators, and assemblers        | 69.5 (60.2–77.4) | 30.5 (22.6–39.8) | 66.3 (56.9–74.5) | 33.7 (25.5–43.1)  |
| Elementary occupations                             | 38.3 (33.0–43.9) | 61.7 (56.1–67.0) | 39.7 (34.2–45.5) | 60.3 (54.5–65.8)  |

CI = Confidence Interval  
 -- The number in this category is low. The corresponding percentage is therefore not presented.

## Industry

The biggest share of the informal sector comprised persons working in the industries 'wholesale and retail trade, repair of motor vehicles and motorcycles' (18.7% in 2014 and 18.3% in 2015), followed by 'construction' (11.1% in 2014 and 11.3% in 2015), 'accommodation and food service activities' (11.0% in 2014 and 10.8% in 2015) and 'activities of households as employers; undifferentiated goods- and services producing activities of households for own use' (8.8% in 2014 and 10.1% in 2015).

Table 6 gives an overview of the share of persons in the formal and the informal sector according to their economic activity. Almost all the employed persons working in the industry 'activities of households as employers; undifferentiated goods- and services producing activities of households for own use' worked under informal conditions in 2014 (98.8%) and 2015 (97.0%). These percentages imply that almost all households as employers employ persons under informal conditions. In 'construction', about half of the employed population works informally and in the industry 'accommodation and food service activities' around 40 percent engage in labor informality.

**Table 6. Percentage of employed population working under formal and informal conditions by economic activity, Sept.–Oct. 2014 and 2015**

| Economic activity  | 2014                  |                       | 2015                |                       |
|--|-----------------------|-----------------------|---------------------|-----------------------|
|  | Formal<br>(95% CI)    | Informal<br>(95% CI)  | Formal<br>(95% CI)  | Informal<br>(95% CI)  |
| Agriculture, forestry, fishing, mining, and quarrying  | --                    | --                    | --                  | --                    |
| Manufacturing  | 74.8<br>(67.5 – 80.9) | 25.2<br>(19.1 – 32.5) | 76.5<br>(68.1–83.2) | 23.5<br>(16.8–31.9)   |
| Electricity, gas, steam and air-conditioning supply  | 94.0*                 | 6.0*                  | 82.5*               | 17.5*                 |
| Water supply; sewerage, waste management and remediation activities  | 80.4*                 | 19.6*                 | 91.3*               | 8.7*                  |
| Construction   | 44.7<br>(36.6 – 53.1) | 55.3<br>(46.9 – 63.4) | 41.8<br>(33.3–50.7) | 58.2<br>(49.3–66.7)   |
| Wholesale and retail trade; repair of motor vehicles and motorcycles   | 63.9<br>(58.9 – 68.6) | 36.1<br>(31.4 – 41.0) | 65.8<br>(60.7–70.6) | 34.2<br>(29.4–39.3)   |
| Transportation and storage   | 73.5<br>(64.9 – 80.7) | 26.5<br>(19.3 – 35.1) | 73.2<br>(64.0–80.8) | 26.8<br>(19.2–36.0)   |
| Accommodation and food service activities  | 60.2<br>(53.2 – 66.8) | 39.8<br>(33.2 – 46.8) | 59.6<br>(52.1–66.6) | 40.4<br>(33.4–47.9)   |
| Information and communication  | 75.9*                 | 24.1*                 | 81.0*               | 19.0*                 |
| Financial and insurance activities   | 86.0*                 | 14.0*                 | 85.1<br>(78.6–89.9) | 14.9<br>(10.1–21.4)   |
| Real estate activities   | --                    | --                    | --                  | --                    |
| Professional, scientific and technical activities  | 83.1*                 | 16.9*                 | 80.4*               | 19.6*                 |
| Administrative and support service activities  | 55.1<br>(46.4 – 63.5) | 44.9<br>(36.5 – 53.6) | 53.1<br>(44.5–61.5) | 46.9<br>(38.5–55.5)   |
| Public administration and defence; compulsory social security  | 78.6<br>(72.2 – 83.8) | 21.4<br>(16.2 – 27.8) | 86.5*               | 13.5*                 |
| Education  | 85.8*                 | 14.2*                 | 83.4*               | 16.6*                 |
| Human health and social work activities  | 75.5<br>(69.5 – 80.7) | 24.5<br>(19.3 – 30.5) | 76.2<br>(69.8–81.6) | 23.8<br>(18.4–30.2)   |
| Arts, entertainment and recreation   | 60.3<br>(47.0 – 72.3) | 39.7<br>(27.7 – 53.0) | 53.5<br>(39.3–67.1) | 46.5<br>(32.9 – 60.7) |
| Other service activities   | 58.0<br>(43.5 – 71.2) | 42.0<br>(28.8 – 56.5) | 51.6<br>(37.6–65.4) | 48.4<br>(34.6 – 62.4) |
| Activities of households as employers; undifferentiated goods- and services producing activities of households for own use | 1.2<br>(0.2 – 8.2)    | 98.8<br>(91.8 – 99.8) | 3.0*                | 97.0*                 |
| Activities of extraterritorial organizations and bodies  | --                    | --                    | --                  | --                    |

CI = Confidence Interval

-- The number in this category is low. The corresponding percentage is therefore not presented.

\* 95% CI could not be calculated by R.

## Income

The majority of the persons working in the informal sector earn lesser than the majority of the persons working in the formal sector. In 2015, 58.2 percent of the persons engaging in labor informality had an income of 2000 guilders or lower per month, while in 2014 this figure was 61.6 percent (Figure 3). For the persons working under formal conditions in 2014 and 2015, 27.6 percent and 30.3 percent respectively earned 2000 guilders or lower per month.

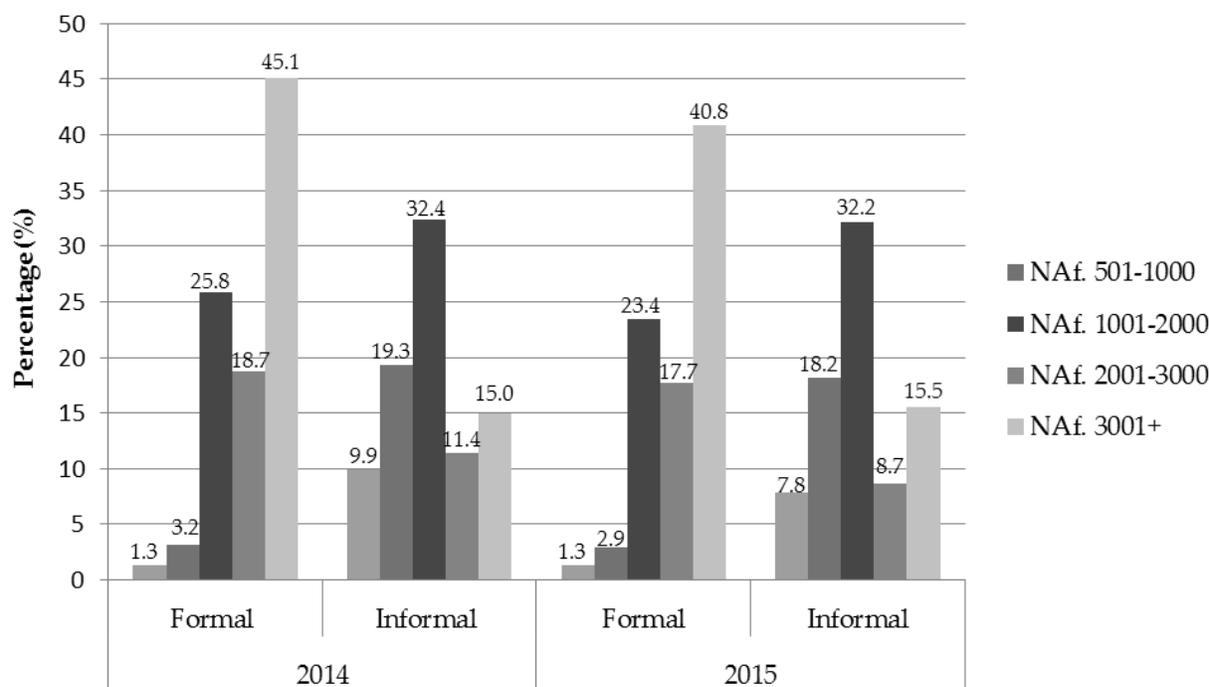


Figure 3. Percentage of formal- and informal sector by income groups

Furthermore, when looking at the results within an income group (Table 7), around 75 percent of the persons who earned less than 1000 guilders per month in 2014 and 2015, worked under informal conditions. Among those who earned between 1001–2000 guilders per month, 39.9 percent engaged in labor informality in 2015, while in 2014 almost the same proportion (37.6%) worked informally.

| Income per month | 2014             |                   | 2015             |                    |
|------------------|------------------|-------------------|------------------|--------------------|
|                  | Formal (95% CI)  | Informal (95% CI) | Formal (95% CI)  | Informal (95% CI)  |
| NAf. 0-500       | 21.6*            | 78.4*             | 25.4 (16.6–36.8) | 74.6 (63.2 – 83.3) |
| NAf. 501-1000    | 25.5 (19.9–32.1) | 74.5 (67.9–80.1)  | 25.1 (19.1–32.2) | 74.9 (67.8 – 80.9) |
| NAf. 1001-2000   | 62.4 (58.5–66.1) | 37.6 (33.9–41.5)  | 60.1 (55.8–64.2) | 39.9 (35.8 – 44.2) |
| NAf. 2001-3000   | 77.3 (72.7–81.4) | 22.7 (18.6–27.3)  | 80.7 (75.7–84.9) | 19.3 (15.1 – 24.3) |
| NAf. 3001+       | 86.2 (83.6–88.4) | 13.8 (11.6–16.3)  | 84.5 (81.5–87.0) | 15.5 (13.0 – 18.5) |

NAf = Netherlands Antillean guilder  
 \* 95% CI could not be calculated by R.

## Discussion and conclusion

Globally, the size of informal labor market varies from an estimated 4–6 percent in high-income countries to over 50 percent in low-income countries (World Bank Group, 2014). The average percentage of informal employment in Latin America and the Caribbean was 46.5% in 2015 (ILO, 2016). In Curaçao, the size of labor informality in 2014 was 32.6 percent and in 2015 it was fairly similar, being 23.5%.

Labor informality plays an important – yet a controversial – role as it provides jobs and reduces unemployment. Nevertheless, in many cases jobs in the informal sector are low-paid and the job security is poor (World Bank Group, 2014). Indeed, about three of every four persons who earned 1,000 guilders per month or less in Curaçao in 2014 and 2015, worked under informal conditions.

Labor informality could support business activity on the one hand, but on the other hand it takes along loss of national regulations compliance, such as labor protocols and tax. It is well known that the size and role of the informal sector increases during economic downturns and periods of economic adjustment and transition. Labor market theory suggests an increase in informal activities as a result of economic turmoil, since informal employment can act as a buffer when people are laid off in the formal sector and need to find new job opportunities (OECD, 2016). Statistics on the economy of Curaçao showed a negative economic growth in 2013 and 2014 (-0.8% and -1.1%, respectively; CBS, 2016), while a slight growth has been estimated in 2015 (0.3%; CBS, 2016). In addition, preliminary data of the Central Bank of Curaçao and St. Maarten suggest that economic growth in Curaçao remained flat in 2016 (0.0%; CBS, 2017).

In measuring the size of labor informality, it should be kept in mind that this can be estimated differently depending on how the concept of informality is operationalized within a country and what empirical information is relevant and available for the particular purpose. As previously mentioned, the use of LFS proved to yield valuable information for measuring informality in different countries (ILO, 2013). Therefore, data of the LFS was used to measure labor informality in Curaçao. Nevertheless, all methods to measure labor informality have their advantages and disadvantages. In the LFS respondents gave answers to questions regarding their e.g. status on the economic position. Given the fact that the information is self-reported, one should bear in mind that the question concerning economic position is prone to multiple forms of interpretation. For instance, a respondent can consider him-/herself a 'self-employed', while according to the definition of the Central Bureau of Statistics (CBS) Curaçao he/she is a 'casual worker/freelancer'. In order to minimize this possible misinterpretation, experienced interviewers conducting the fieldwork of the LFS were yearly trained in the methodology of the study to assure consistency in data collection.

In conclusion, the size of labor informality in Curaçao measured in 2014 and 2015 was fairly equal, the proportion of men and women engaging in informality is fairly similar and the median age of those engaging in informality is statistically the same as those working under formal conditions. Furthermore, the greatest proportion of persons engaging in labor informality in 2014 and 2015 in Curaçao are in the age group 45–54 years; and/or have the first stage of the second level as their highest level of education; and/or consist of persons with an elementary occupation (unskilled workers); and/or comprised persons working in the industry 'wholesale and retail trade, repair of motor vehicles and motorcycles'; and/or consist of persons who earn less than 2000 guilders per month.

Moreover, the majority of the employed youth population (15–24 years); the majority of the persons who have an elementary education as their highest level of education; the majority of the persons having an elementary occupation; and the majority of persons who earned NAf. 1,000 guilders per month or less worked under informal conditions in 2014 and 2015.

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