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The Jordanian Social Contract: Shifting from Public Employment As A Source of Social Insurance to Government-Regulated Social Insurance

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THE JORDANIAN SOCIAL CONTRACT: SHIFTING FROM PUBLIC EMPLOYMENT AS A SOURCE OF SOCIAL INSURANCE TO GOVERNMENT-REGULATED SOCIAL INSURANCE[1]

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Abstract

Under the old social contract, the main components of social insurance were provided through several features of public employment: income during old-age and in case of disability was assured through pensions, while income was protected from sudden shocks by job security. In its effort to shift toward a new social contract, the Government of Jordan has consistently articulated its vision of a private sector led economy, and its intention to implement this vision through a shift from direct public provision of the social insurance components of the social contract to government as a regulator and facilitator of social insurance through private sector employment. This paper examines the extent to which Government regulatory efforts are ensuring private wage employment provides social insurance. The paper shows that it has become increasingly difficult for Jordanians entering the labor market to obtain a first job that provides effective coverage and that there are few opportunities for Jordanian workers to shift later into a job that provides effective coverage. The law is relatively comprehensive in requiring coverage. Despite the fact that coverage is required without regard to firm size, the existence of a written contract or regularity of work, compliance with the law is strongly determined by these factors. Surprisingly, when controlling for a wide range of job characteristics, there are no significant differences in coverage by gender or nationality.

JEL classification: J3, J8, K3

Keywords: Nonwage Labor Costs and Benefits, Social Security, Pay Equity, National Labor Policy, Labor Law

ملخص

بموجب العقد الاجتماعي القديم، كانت العناصر الرئيسـية للتأمين الاجتماعي تقدم من خلال عدة سـمات للتوظيف بالقطاع العام: فالدخل أثناء الشـيخوخة وفي حالة العجز مضـمون من خلال المعاشـات التقاعدية، في حين أن الدخل محمي من الصـدمات المفاجئة بسـبب الأمن الوظيفي. في إطار جهودها للتحول نحو عقد اجتماعي جديد، دأبت الحكومة الأردنية على توضـيح رؤيتها لاقتصـاد يقوده القطاع الخاص، وعزمها على تنفيذ هذه الرؤية من خلال أن يتم التحول من تقديم القطاع العام بنفسـه لمكونات التأمين الاجتماعي في العقد الاجتماعي إلى قيام الحكومة بدور المنظم والميسر لـ للتأمين الاجتماعي من خلال التوظيف في القطاع الخاص. تفحص هذه الورقة البحثية إلى أى مدى تضـمن الجهود التنظيمية الحكومية للتوظيف بالقطاع الخاص بأجر بضـمان التأمين الاجتماعى. حيث توضـح أن الأمر يزداد صـعوبة يوماً بعد يوم بالنسـبة للأردنيين الذين يدخلون سـوق العمل لأن يحصـولوا على وظيفة أولى توفر لهم تغطية فعالة، وأنه ليس هناك سوى فرص قليلة للعمال الأردنيين للتحول لاحقا إلى وظيفة تقدم تغطية فعالة للتأمين الاجتماعى. القانون شامل ولكن بصورة نسبية في اشتراط التغطية بالتأمين الاجتماعى. على الرغم من حقيقة أن التغطية بالتأمين مطلوبة بغض النظر عن حجم الشركة، أو وجود عقد مكتوب أو انتظام العمل، إلا أن الامتثال للقانون تحدده هذه العوامل وبقوةٍ. والمثير للدهشـة أنه عند التحكم في مجموعة واسعة من الخصائص الوظيفية، لا توجد اختلافات كبيرة في التغطية التأمينية حسب النوع الاجتماعى أو الجنسية.

Section 1: Introduction

State-society relations in Jordan – as in much of MENA throughout the 1950s, 1960s and 1970s – were based on the so-called "authoritarian bargain" social contract. Under this social contract, key social protections including social insurance were provided directly through public employment. Jordan's social contract began to fray during the 1980s and 1990s as the public sector could not afford to maintain its side of the bargain. Although elements of a new social contract have been tried, a fiscally and politically sustainable social contract has not yet solidified.

Under the old social contract, the main components of social insurance were provided through several features of public employment.[4] Income during old-age and in case of disability was assured through pensions. Income during maternity was provided through paid maternity leave. And, crucially, income was protected from sudden shocks by job security – the fact that a public sector job was a job for life.

Over the past two decades, in its effort to shift toward a new social contract, the Government of Jordan has consistently articulated its vision of a private sector led economy, including the private sector as the source of employment that meets the needs and aspirations of Jordanian citizens. Furthermore, the Government has articulated it intention to implement this vision through a shift from direct public provision of the social insurance components of the social contract to government as a regulator and facilitator of social insurance through private sector employment.

This paper examines the extent to which the social insurance aspect of the new social contract has been successfully achieved. More specifically we examine the extent to which Government regulatory efforts are ensuring private wage employment provides social insurance. Section 2 summarizes the context and concepts using existing literature. Section 3 analyzes the extent to which the legal framework requires private employment to provide these social insurances. Section 4 analyzes the extent to which private employment effectively provides coverage – that is, the extent to which private sector workers actually benefit from coverage. Section 5 analyzes transitions into and out of effective coverage. Section 6 examines the extent to which coverage is important for job satisfaction. Section 7 concludes.

Section 2: Context and concepts

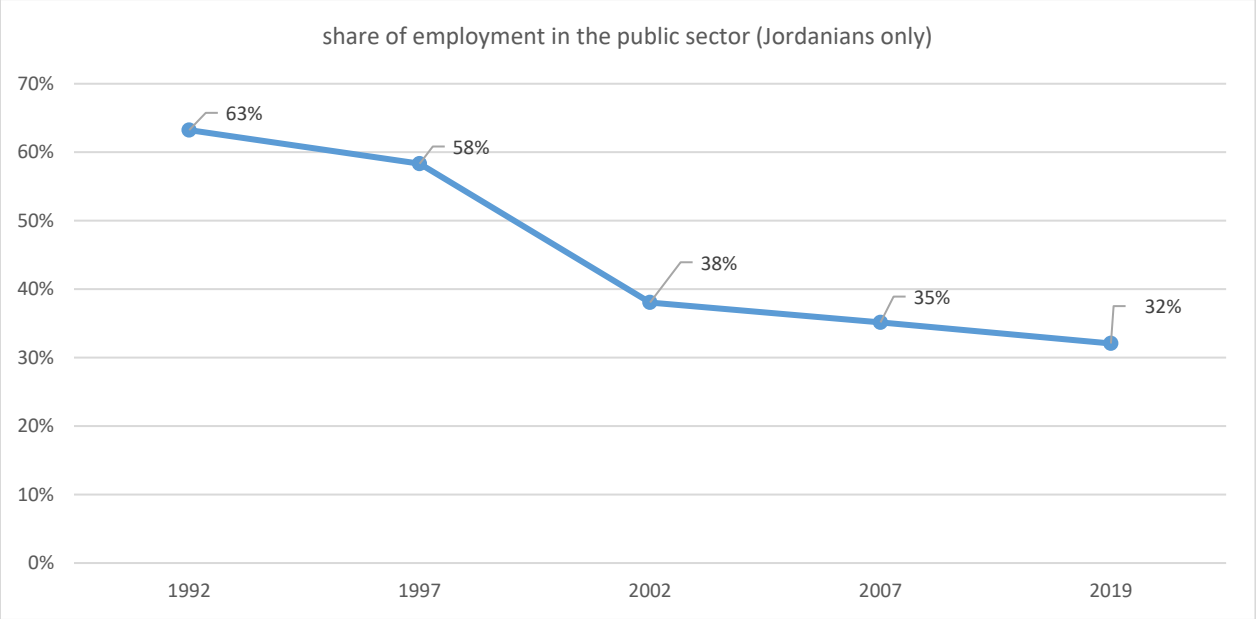
Context

Twenty years ago, nearly two-thirds of Jordanians worked directly for the public sector. Recognizing that fiscal constraints could no longer sustain such high levels of public employment, the Government shifted strategy. (See Figure 1.) Rather than directly providing employment, the

[4] This paper focuses on social insurance aspects of the evolving social contract that are provided through the Social Security Corporation. The social contract's assurance of a guaranteed minimum standard of living is addressed in companion papers. Health insurance issues are included in the paper that addresses other aspects of health services. Assurance that employment provides a living wage is addressed together with minimum wages and poverty. And cash assistance for those unable to work is addressed in the paper on social assistance.

Government's shifted its strategy toward encouraging job creation by the private sector and regulating the labor market to ensure private sector jobs provide a decent standard of living.

Figure 1: Share of employment in the public sector (Jordanians only)



Source: DOS, Employment in Enterprise Surveys.

Numerous official documents have articulated the specific actions Government would take to ensure the quality of private sector jobs, with an emphasis on social insurance:

- Encouraging Jordanian workers to obtain jobs in the private sector. (National Employment Strategy and Jordan Economic Growth Plan)
- Legislation requiring the provision of a minimum set of benefits for private sector employees and the self-employed including social security, health insurance, and maternity benefit. (Jordan Vision 2015)
- Verifying private sector enterprises' compliance with the Labor Law and relevant regulations for all employees, prior to providing the enterprise with any Government service. Revising regulations to ensure working conditions in all sectors are appropriate for Jordanian workers, including social security coverage, including through bylaws for agriculture. (National Social Protection Strategy)
- Enhancing compliance with the Social Security Law and limiting evasion. (Strategic Plan of the SSC)
- Enhancing the inspection apparatus in order to reduce the number of labor market violations. (Strategic Plan of the Labor Ministry)
- Address the imbalance between public and private wages (Government Economic Priorities Program, i.e., the reform matrix)

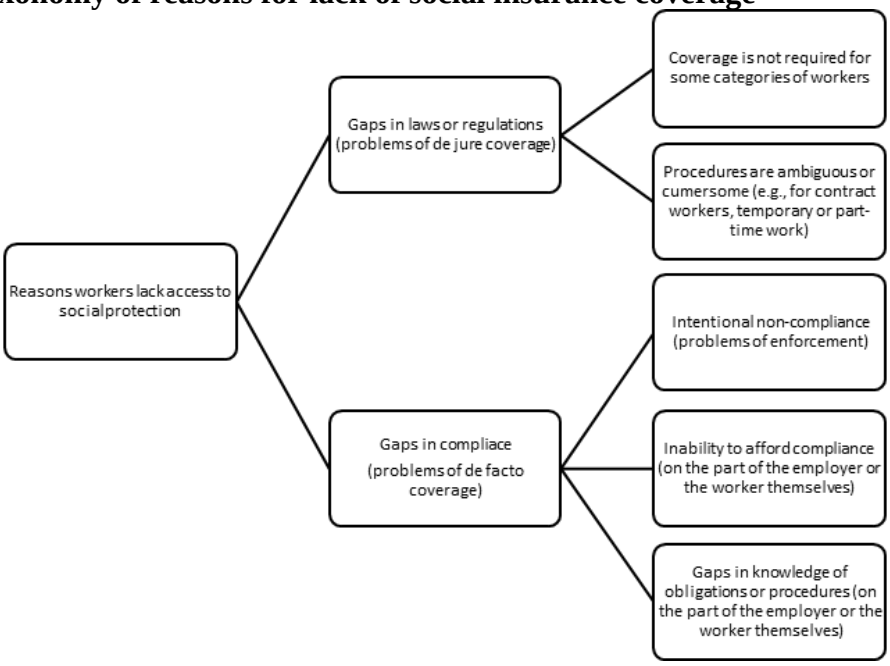
Several additional features of Jordan's labor market are important as context. First, the Jordanian population is young and increasingly educated (Assaad et al., 2021) Second, female labor force participation is among the lowest internationally and is especially unusual given the level of female education in Jordan. Third, Jordan has very high levels of unemployment, especially among youth and among women. Fourth, many of Jordan's most educated citizens leave the country to work overseas, while many less educated migrant workers are employed inside Jordan (Fallah et al., 2019). As of the most recent census, there were more than twice as many non-Jordanians working in Jordan than unemployed Jordanians.[5] In fact, there are more jobs filled with non-Jordanians than the number of unemployed Jordanians at every level of education except Bachelors' degree (Razzaz, 2022).

Conceptual framework

There is a large theoretical and empirical literature on social insurance coverage around the world. In order to provide policy-relevant analysis, it is important to distinguish among the various reasons workers may lack social insurance coverage. The figure below presents a simple taxonomy. Gaps in legislation refers to situations in which the worker is not required by law to be covered. For example, internationally it is common that coverage is not required for workers in agriculture and those who work part-time. The law may explicitly indicate that they are excluded or may allow coverage on a voluntary basis. Gaps in compliance refers to situations in which workers lack *effective* coverage even though coverage is required by law. Most often gaps in compliance reflect the employer's intentional non-compliance in order to reduce the cost of labor. In some cases, employees themselves do not want to participate in order to avoid paying the portion of contributions that is taken out of their wages. Gaps in compliance may also be due to lack of knowledge or ability to comply.

[5] Non-Jordanians working in Jordan are primarily comprised of migrant workers (largely from Egypt). While smaller than the number of migrant workers, there are also significant numbers of refugees (largely from Syria) working in Jordan.

Figure 2: Taxonomy of reasons for lack of social insurance coverage



Source: Constructed by the authors

Data and methods

This paper relies on Jordan Labor Market Panel Survey in 2010 and 2016, which are two nationally representative datasets that include a rich set of questions on social security coverage among workers, their individual, job-related, and household characteristics.

This paper explores the following issues:

1. Comparison between the *de jure* and the *de facto* social security coverage of workers. For this, the paper draws on a descriptive analysis using Jordan Labor Market Panel Survey (JLMPS) in 2016.
2. The determinants of social security coverage among employees in the private sector, who should be covered by law, to investigate the factors that are most associated with gaps in compliance. We estimate a logit regression for the probability of having social security coverage associated with the current job, using JLMPS 2016.
3. The extent of the informality trap and the probabilities of transition to formal jobs, drawing on a descriptive analysis of the transition proportions between different employment statuses between 2010 and 2016, using the panel data of JLMPS.
4. Key job characteristics that private sector jobs need to have to make them as appealing to workers as public sector jobs have been. We also examine how important social insurance aspects of public sector jobs (e.g., insurance against old age, disability, maternity, and sudden shocks) relative to other characteristics of public sector employment (e.g., the public sector wage premium, and working conditions). After factoring job satisfaction, we estimate the determinants of job satisfaction using OLS regression on JLMPS 2016.

Section 3: The extent to which the legal framework requires coverage

Required (De jure) coverage

The framework for private sector employment to provide social insurances has existed since 1978. From the beginning, coverage has been required for a very broad set of workers "without any discrimination as to nationality, and regardless of the duration and form of the contract, or the nature or amount of the wages."[6] (Consistent with the Labor Law, all employees are understood to have a contract, even if it is bases simply on an oral agreement.) Although the law did not explicitly refer to the size of the firm, the Social Security Corporation started enforcing the law for large firms, gradually enforcing it for smaller firms, and launching a campaign in 2010 to cover even firms with only one worker.

The current Social Security Law, refers to three main categories of private sector workers for whom the general provisions of the law do not apply:[7]

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[6] See Article 4 of the original Social Security Law (from 1978): https://www.ssc.gov.jo/en/for-the-year-1978/

[7] In addition to the three categories described above, the current law (Law No. (1) for 2014) excludes several other groups. Article (4) specifies coverage as follows: A. The following categories, who are not under sixteen years of age, are subject to the provisions of this Law without any discrimination as to nationality, and regardless of the duration or form of contract, the nature and amount of wage, and whether the work is performed mainly inside or outside the Kingdom, provided that the wages based on which contributions are calculated be no less than the minimum wage specified by the valid in force Labor Law, without prejudice to the provisions of international agreements regulating the rules of dual insurance coverage: (i) All laborers subject to the valid in force provisions of the labor law; (ii) Workers who are not subject to the retirement pension under the provisions of civil or military retirement laws; (iii) Jordanian persons employed by regional and international missions, foreign and Arab political or military missions operating inside the Kingdom and attachés and their affiliated educational and cultural centers; and (iv) Self-employed individuals, employers and general partners working in their own firms, subject to a resolution to be issued by the Council of Ministers upon recommendation by the Board covering said categories by the provisions of this Law not later than January 1, 2015; provided that the bylaws issued pursuant to this Law determine their coverage-related provisions, including working hours, leaves, break hours, inspection and wages subject to the provisions of this Law. B. The following categories shall not be subject to the provisions of this Law: (i) Individuals paying their retirement contributions pursuant to the civil or military retirement laws; (ii) non-Jordanians employed by regional and international missions, foreign and Arab political or military missions operating inside the Kingdom and attachés and their affiliated educational and cultural centers; (iii) Laborers whose employment relationship with their employers is irregular. An employment relationship shall be deemed irregular in the following cases: (a) A day laborer working sixteen days or more in any given month; (b) An hour, piece, shipment laborer or the like who works sixteen days or more in any given month; regardless of the number of working hours, pieces or shipments per day; (c) A laborer who is paid on a monthly basis; regardless of the number of working days per month, with the exception of the first month of work to which the principle of sixteen or more working days per month shall apply. C. Subject to the provisions of Article (3) hereof, insurances may be applied to domestic workers and the like, by virtue of a resolution of the Council of Ministers upon
recommendation by the Board, and all the issues pertaining to their insurance coverage shall be regulated by virtue of the regulations issued pursuant to this Law.
D. (i) Notwithstanding the stipulated in the provisions of paragraph (A) of this article; The Corporation may exclude some laborers not exceeding twenty eight years of age from the coverage in the old-age insurance in the firms whose total number of workers is not exceeding (25), which are registered in the Kingdom after the provisions of the amended law entering into force; for a period not more than five years as of the firm registration date provided that the firm commits to pay the contributions of disability and death insurances by (1%) of the insured wage that is subject to deduction (ii) Firm commitment shall remain valid to cover the insureds in the remaining insurances applicable under the provisions of this law. (iii) In all cases; applying the stipulated in sub-paragraph (1) herein this paragraph shall be

- Most employees in agriculture and domestic work sectors are excluded on the basis of the fact that they are not subject to the Labor Law.[8] There are, however, some categories of employees in agriculture who are included, specifically agronomists, veterinarians, agriculture workers in public institutions, technical workers on agricultural machinery and in nurseries, hatcheries, fish and beekeeping farms.[9]
- Employees who work fewer than 16 days in a month are excluded (see Social Security Law Article 4.A.iii.a.)
- Non-wage workers. Unpaid family workers are excluded on the basis of the fact that they are not subject to the Labor Law. Own-account workers and employers are subject to separate requirements (see Social Security Law Article 4.A.iv.). At the time the Law was passed, this category of workers could obtain coverage for old age, disability, and death insurance (Article 7). Later, Nitham 14 of 2015 (Article 41.A) stated specific conditions that could trigger mandatory coverage.[10] In this paper, we consider coverage to be optional for all non-wage workers because the data required to determine if their social insurance coverage is required is not available in the JLMPS data.

Over the years, the types of insurance provided through the Social Security Corporation has expanded with the goal of leveling the playing field between private and public sector jobs. Specifically, to ensure private sector workers are insured against sudden shocks and guaranteed income during maternity, the 2010 law introduced unemployment insurance and maternity insurance.[11]

Based on the 2016 JLMPS, we estimate that 65% of private sector wage workers are required to be covered. Twenty-two percent are excluded because they work in agriculture of domestic sectors and 13% because they work fewer than 16 days per month. Similarly, we estimate that 64% of all

suspended in case the insured completes twenty-eight years of age. (iv) Provisions of this paragraph shall be regulated pursuant to a regulation issued for this
purpose.

[8] The Social Security Law Article 4.1.A indicates that the law applies to workers who are subject to the Labor Law. The current Labor Law (referred to as Law No. 8 of 1996) in Section 3 indicates that: The provisions of this Code shall apply to all workers and employers, except: (1) government and municipal officials; (2) an employer's family members working without remuneration in his undertakings; (3) domestic servants, gardeners, cooks and the like; (4) agricultural workers excluding those who shall be covered by this Code pursuant to a decision taken by the Council of Ministers on the basis of a recommendation by the Minister. Note that domestic workers are subject to Bylaw "Regulation of Domestic Workers, Cooks, Gardeners and Similar Categories" of 2009, which requires employers to obtain insurance providing medical care for hospitalizations, lump sum benefits for permanent disability from an accident and lump sum survivor benefits in case of accidental death. For purposes of this report, we assume the JLMPS question on effective coverage refers only to the normal Social Security Corporation coverage.

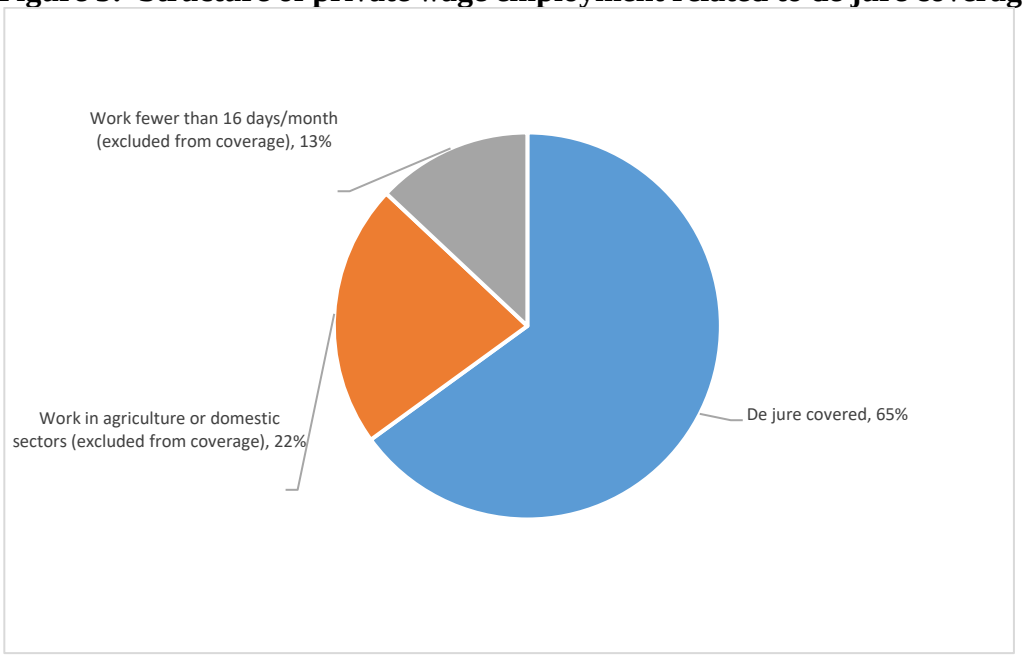
[9] Regulation of Agriculture Workers Categories Subject to the Labor Law Provisions for the Year 2003.

[10] See https://www.ssc.gov.jo/wp-content/uploads/2022/05/Insurance-Coverage-Bylaw.pdf

[11] The 2010 and 2014 laws also made many changes to protect the financial sustainability of the system. These changes included restricting benefits (especially for workers who retire early) and increasing contributions required from workers and employers (Alhawarin & Selwaness, 2019). Further changes have been made through cabinet-level regulations and temporary COVID-related changes have been made through a series of Defense Orders (UNICEF & Jordan Strategy Forum (JSF), 2020).

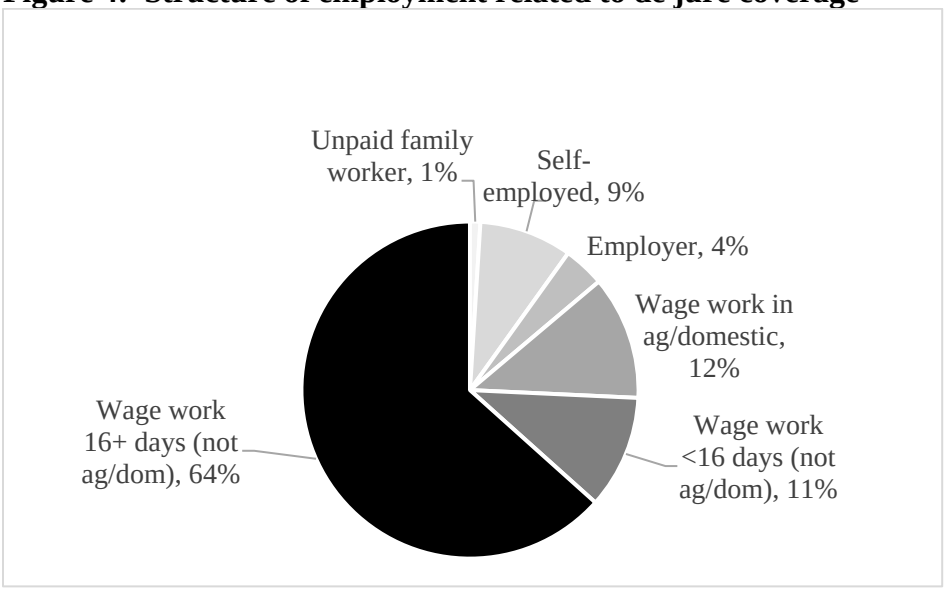
workers (including public sector and non-wage workers) are required to be covered.[12] The remaining 46% of workers are exempt from the coverage requirement on the basis of the conditions above, roughly in equal shares. Twelve percent of workers are in domestic or agriculture sectors, 11% work less than 16 days a month, and 14% are non-wage workers.

Figure 3: Structure of private wage employment related to de jure coverage



Source: Constructed by the authors' using JLMPS 2016

Figure 4: Structure of employment related to de jure coverage



Source: Constructed by the authors' using JLMPS 2016

[12] When we talk about workers, we are referring to employed workers (except as noted otherwise).

Compliance with De Jure Coverage in the Aggregate

Among private sector wage workers who are de jure (required to be) covered, effective coverage is 39%. Effective coverage is 75% among public sector wage workers who are required to be covered. In order to understand reasons for relatively low compliance with the law, it is useful to examine the characteristics of the workers who are de jure but not effectively covered and the characteristics of their jobs. This analysis will allow us to assess if lack of compliance is randomly distributed or if it is systematically related to certain types of workers or jobs.

Section 4: Effective Coverage in Private Wage Employment

In this section we examine the characteristics of workers and jobs which are effectively covered. We disaggregate along various dimensions in order to provide a comprehensive picture. It is, nevertheless, important to bear in mind that most of these characteristics are not relevant to de jure coverage.

We start by providing an overview of effective coverage rates for all groups of workers, to contextualize the issue of informality in Jordan's labor market. Then, following this overview, we will primarily focus on private sector wage workers who should be covered by law. We will examine characteristics of workers and jobs that lack such *effective* coverage in private sector wage employment that is *de jure* covered. For this purpose, we begin by analyzing each characteristic on its own. We then analyze the characteristics as a group to understand the relationships among characteristics

Throughout this section, we disaggregate by gender and by nationality.[13] We include these distinctions not because they are relevant to de jure coverage, but because there are significant differences in the jobs held and in effective coverage rates.

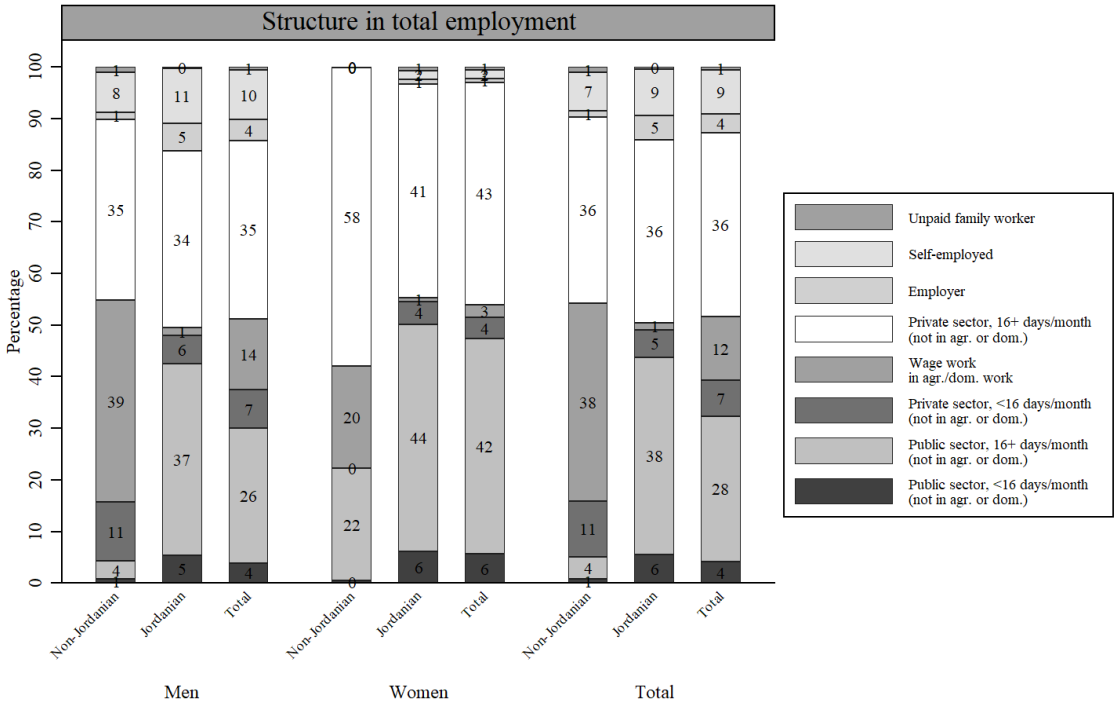
We start by examining employment status and institutional sector in more detail. After looking at these two dimensions, we narrow our focus to wage employment in the private sector. Non-wage employment is less important to us because coverage is not required (de jure) for non-wage employment. Public sector wage employment is not distinct from private sector wage employment in terms of required coverage. However, there are two reasons for focusing on the private sector. First, because public sector coverage is nearly universal – even when it is not required by law, there is less to be learned from a close examination. Second, because of the government's strategic goal of shifting away from public employment toward regulated private employment, it is imperative to identify the extent to which the government has been successful in ensuring regulatory compliance in the private sector.

Employment status, institutional sector and de jure coverage

[13] For more details on the structure of labour market by gender and nationality, see Appendix 1.

Figure 5 shows the structure of employment by gender and nationality. Non-wage work comprises a small share of employment among all four main demographic groups.[14] Non-wage work is highest among Jordanian men, for whom it comprises 16% of all employment. Non-wage work comprises 4% of all employment among Jordanian women, 10% of all employment among non-Jordanian men, and a negligible share of all employment among non-Jordanian women. As discussed earlier, coverage is not required for non-wage workers and, although it is available on a voluntary basis for Jordanians, very few obtain coverage.[15]

Figure 5: The structure of employment by gender and nationality, JLMPS 2016



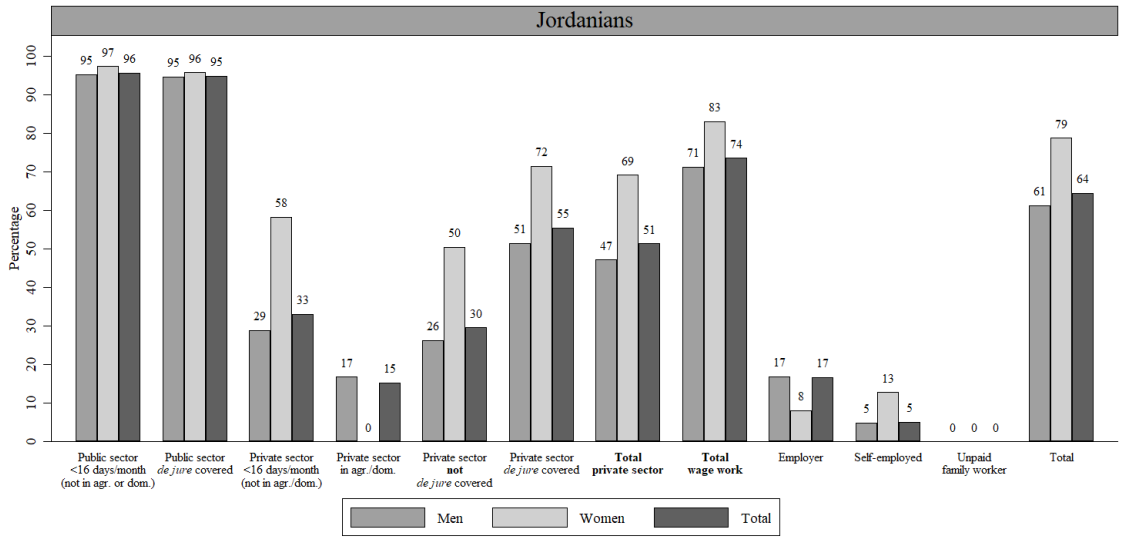
Source: Constructed by the authors' using JLMPS 2016. Note: Market definition employment for the primary job in a 3-months reference period.

The law does not distinguish between public and private sector wage work. Nevertheless, the effective coverage rates are considerably higher for public sector workers than for their counterparts working in the private sector. Effective coverage is 46% of all wage work, and 30% of all private sector wage work. Nearly all Jordanians working in the public sector have effective coverage, with little difference between men and women. Moreover, coverage rates for Jordanians in the public sector are nearly universal even if they work fewer than 16 days a month (and therefore are not required to be covered). Effective coverage among non-Jordanians in the public

[14] Non-wage work comprises 14% of total employment.
[15] Among Jordanians effective coverage rates are 17% among employers, 5% among the self-employed and 0% among unpaid family workers.

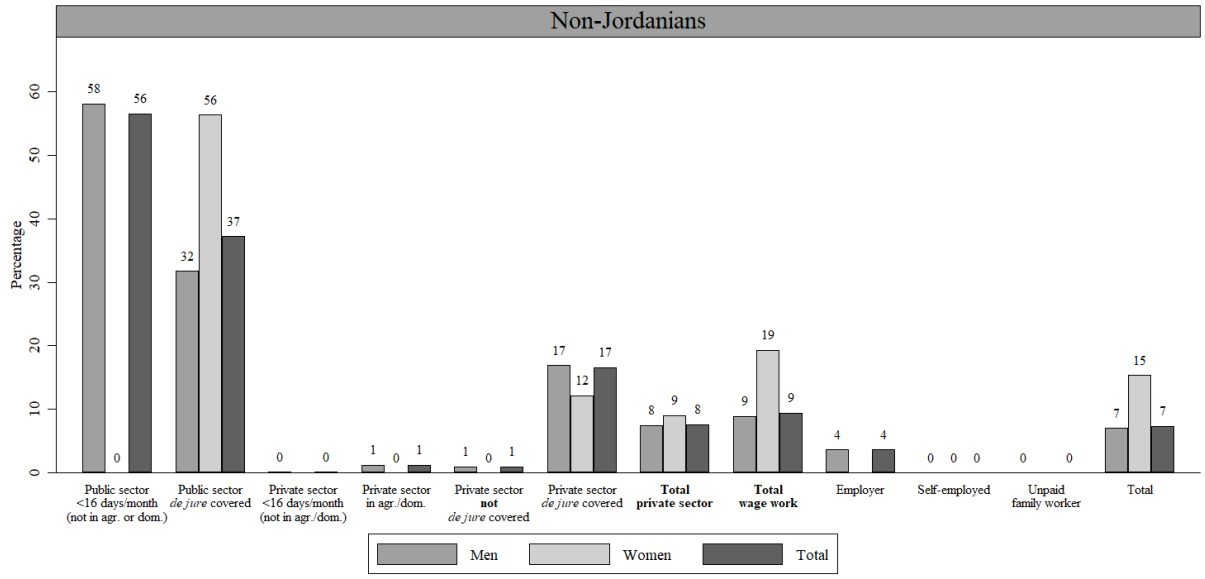
sector are much lower. Even among those working 16 or more days per month, only 37% are effective covered.[16]

Figure 6: Effective coverage rates relevant to de facto coverage, by gender (Jordanians only)



Source: Constructed by the authors' using JLMPS 2016

Figure 7: Effective coverage rates by de jure coverage categories (non-Jordanians only)



Source: Constructed by the authors' using JLMPS 2016

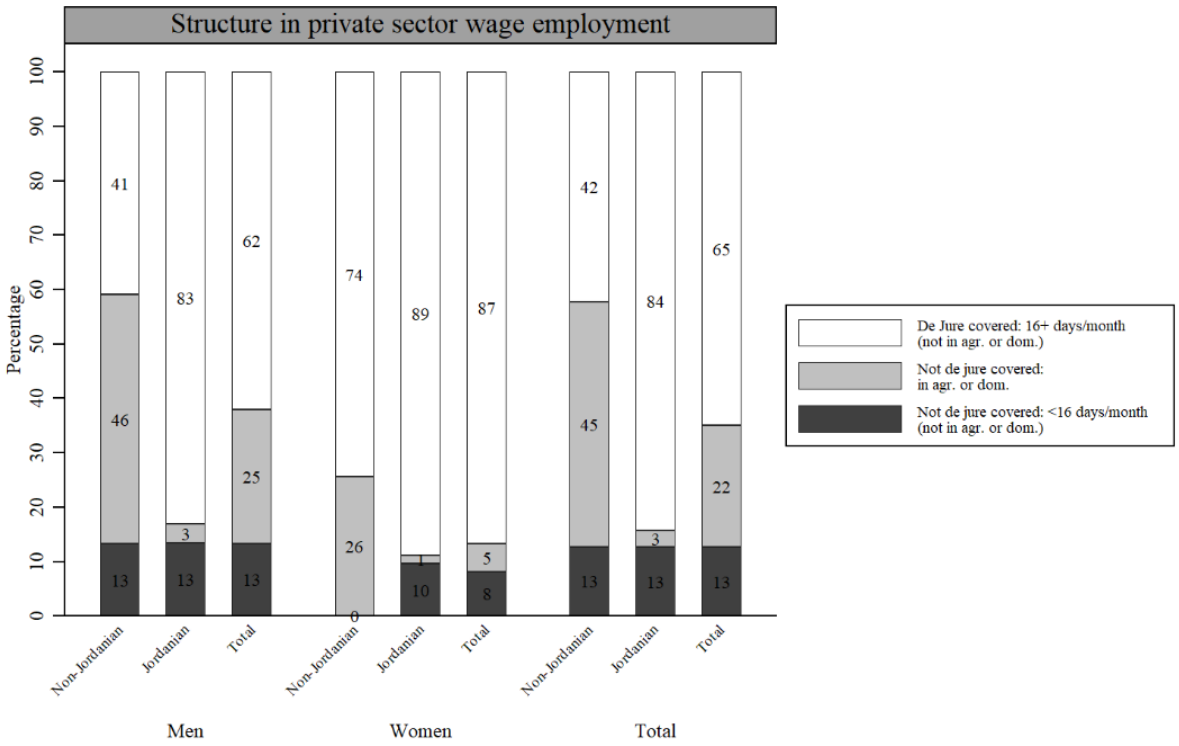
[16] Note that the number of non-Jordanians working in the public sector is relatively small.

Effective coverage rates are significantly lower in private wage work than in public wage work for all four main demographic groups. Moreover, there are large differences by gender and nationality. Among Jordanian private sector wage workers, coverage rates among men are 47% and among women are 69%. Among non-Jordanian private sector wage workers, coverage rates are 8% among men and 9% among women.

To some extent, the differences in effective coverage rates by nationality are related to differences in de jure coverage. As seen in Figure 8, 84% of Jordanian private sector wage workers are required to be covered, compared to 42% among non-Jordanian private sector wage workers. Nevertheless, differences in de jure coverage explain only part of the differences by nationality. When looking only at private sector wage workers who are required to be covered, 55% of Jordanians are effectively covered compared to 17% among non-Jordanians.

Although smaller than by nationality, there are also differences in effective coverage rates by gender. Jordanian women in private sector wage work have higher coverage rates than their male counterparts whether they are de jure covered or not. To a large extent the differences in effective coverage between Jordanian men and women is due to the sectors in which they work, as will be shown below.

Figure 8: Structure of private sector wage employment by categories relevant to de facto coverage



Source: Constructed by the authors' using JLMPS 2016

Coverage by economic activity sector

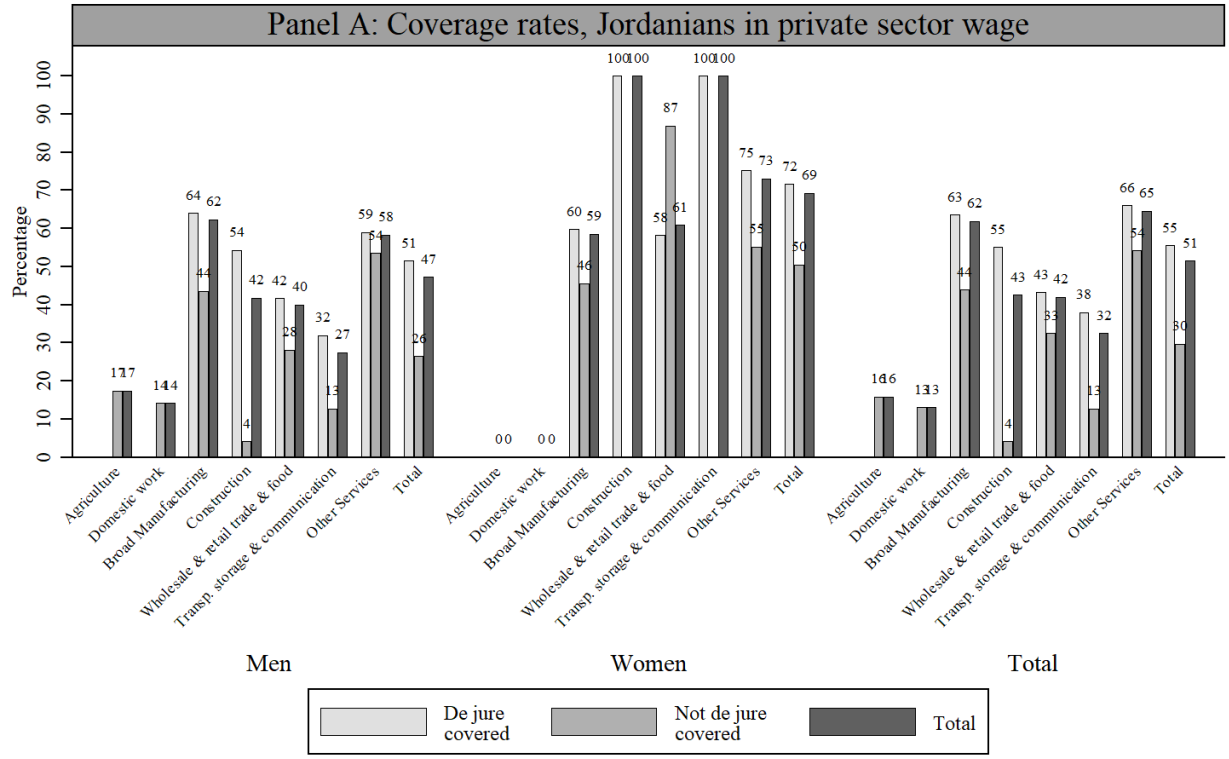
There is an important variation in private sector wage workers' coverage rates by sectors of economic activity sector. Figure 9 shows coverage rates by economic activity sectors. The figure also distinguishes between those who are de jure covered and those for whom coverage is not required. As indicated earlier, agriculture and domestic work sectors are exempt from coverage as are workers in any sector who work fewer than 16 days per month.

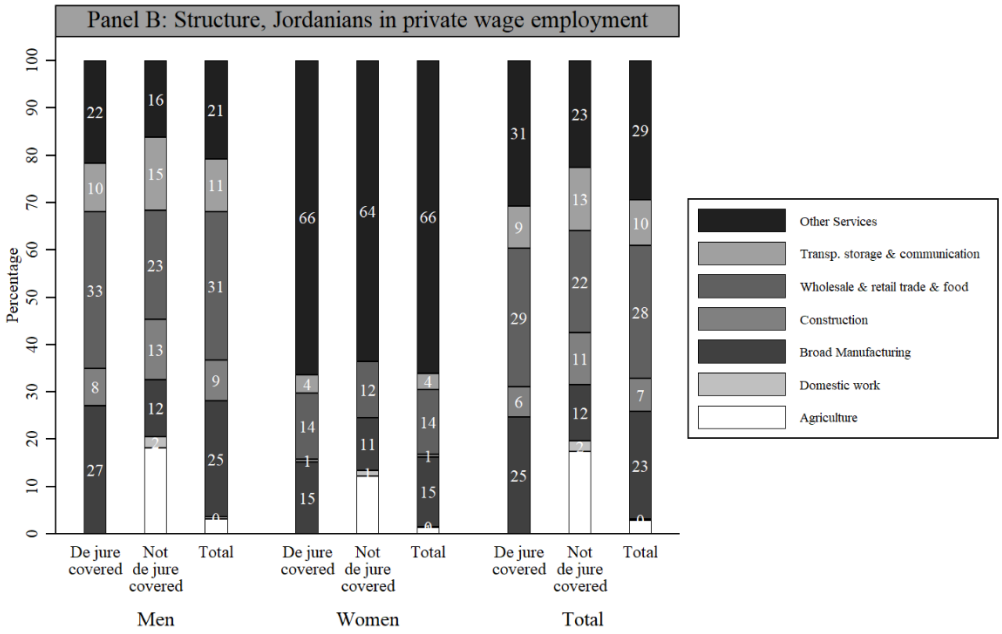
As expected, effective coverage rates are low for workers in agriculture, in domestic work and for those who work fewer than 16 days per month. Effective coverage rates are 16% for Jordanians and 0% for non-Jordanians in agriculture and 13% for Jordanians and 2% for non-Jordanians in domestic work.[17]

Perhaps more surprisingly, effective coverage rates vary significantly across economic activity sectors even when coverage is required. Among Jordanians, effective coverage rates are 63% in manufacturing, 55% in construction, 43% on trade and 38% in transportation. Rates among non-Jordanians are lower across the board: 32% in manufacturing, 3% in construction and 18% in trade. There were also gender differences among Jordanians: effective coverage rates were higher among men (64% for men versus 60% among women) in manufacturing but higher among women in trade (42% among men versus 58% among women).

[17] Note that the sample size was insufficient to show numbers for non-Jordanian women.

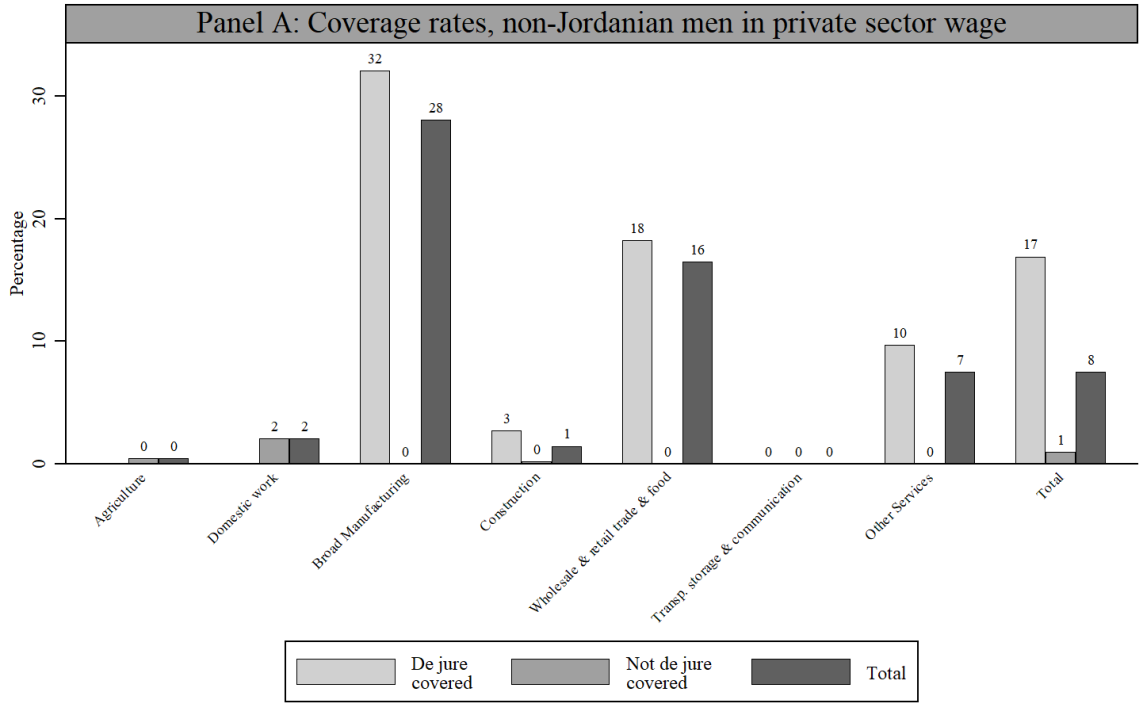
Figure 9: Social insurance coverage rates (and structure of employment in percentage) by economic activity sectors and by sex, among Jordanians wage workers in the private sector, JLMPS 2016, ages 15-59

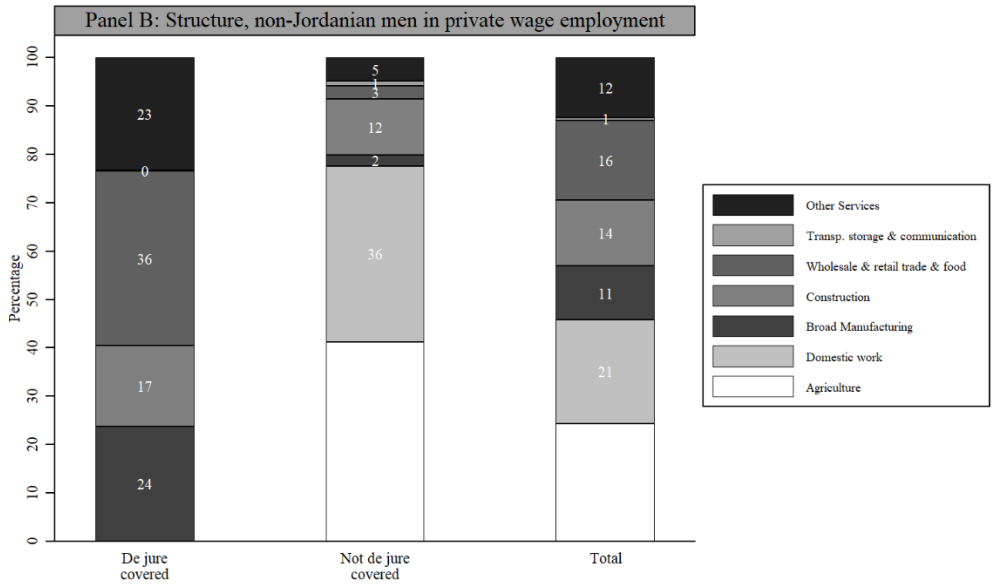




Source: Constructed by the authors' using JLMPS 2016
Notes: Cell sizes were too small (<30) for women working in construction (13), men and women in domestic work (12 and 8, respectively).

Figure 10: Social insurance coverage rates (and structure of employment in percentage) by economic activity sectors and by sex, among non-Jordanian male wage workers in the private sector, JLMPS 2016, ages 15-59





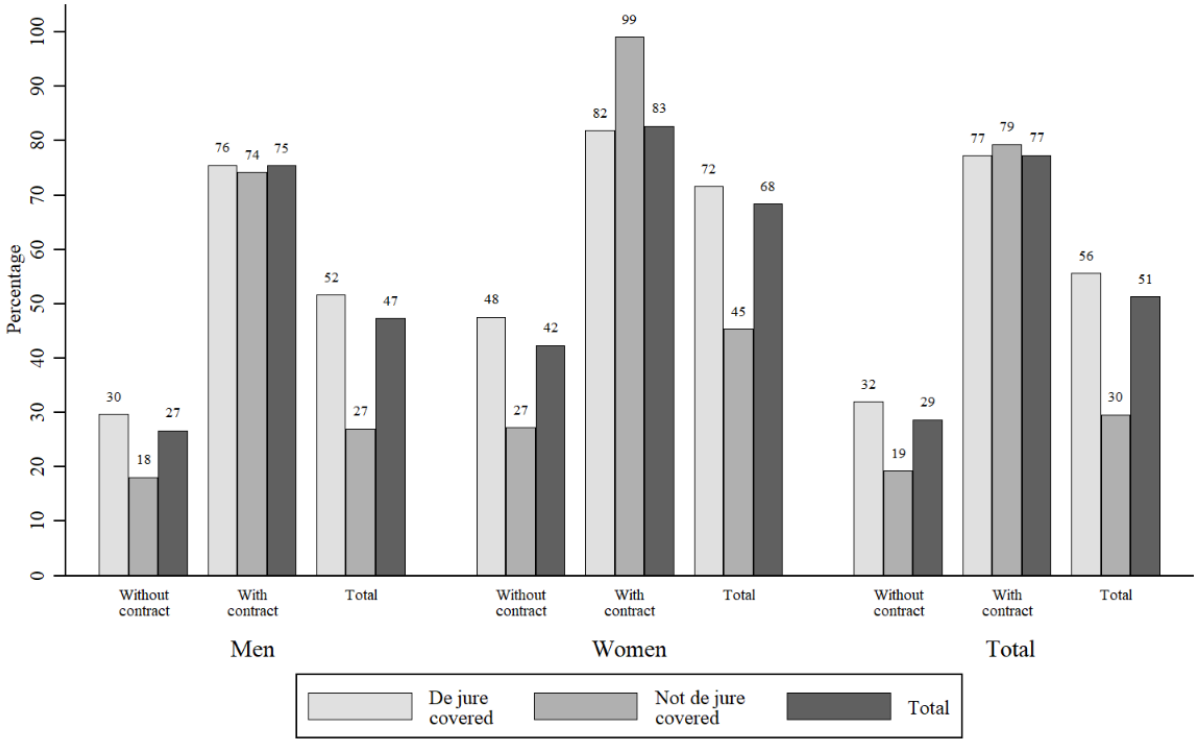
Source: Constructed by authors using JLMPS 2016
Note: Cell sizes for non-Jordanian female wage workers were too small in all sectors even after adding relevant ones together, except other services (N=35).

Existence of a written contract

Jordanian labor law considers an oral agreement equivalent to a written agreement. Accordingly, all employees are assumed to have a contract – whether oral or written – and social security is required "regardless of the form of the contract." Although the law does not distinguish, in practice it is easier to hold an employer accountable for compliance if the contract is written. The difference in ease of enforcement is likely responsible for the fact that having a written contract is an important factor for both Jordanians and non-Jordanians.

Figure 11 shows that among Jordanians for whom coverage is required, the existence of a written contract increases effective coverage rates from 32% to 77%. Among non-Jordanians for whom coverage is required, the existence of a written contract increases effective coverage rates from 10% to 34%.[18]

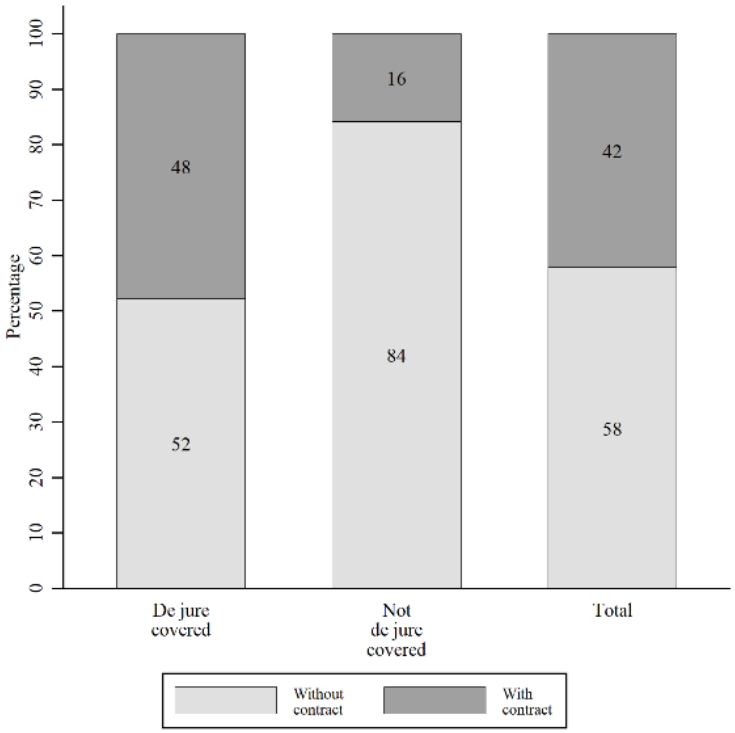
Figure 11: Social insurance coverage rates by whether there exists a written contract or not, sex, and nationality, Jordanian wage workers in the private sector, JLMPS 2016, ages 15-59



Source: Constructed by the authors' using JLMPS 2016

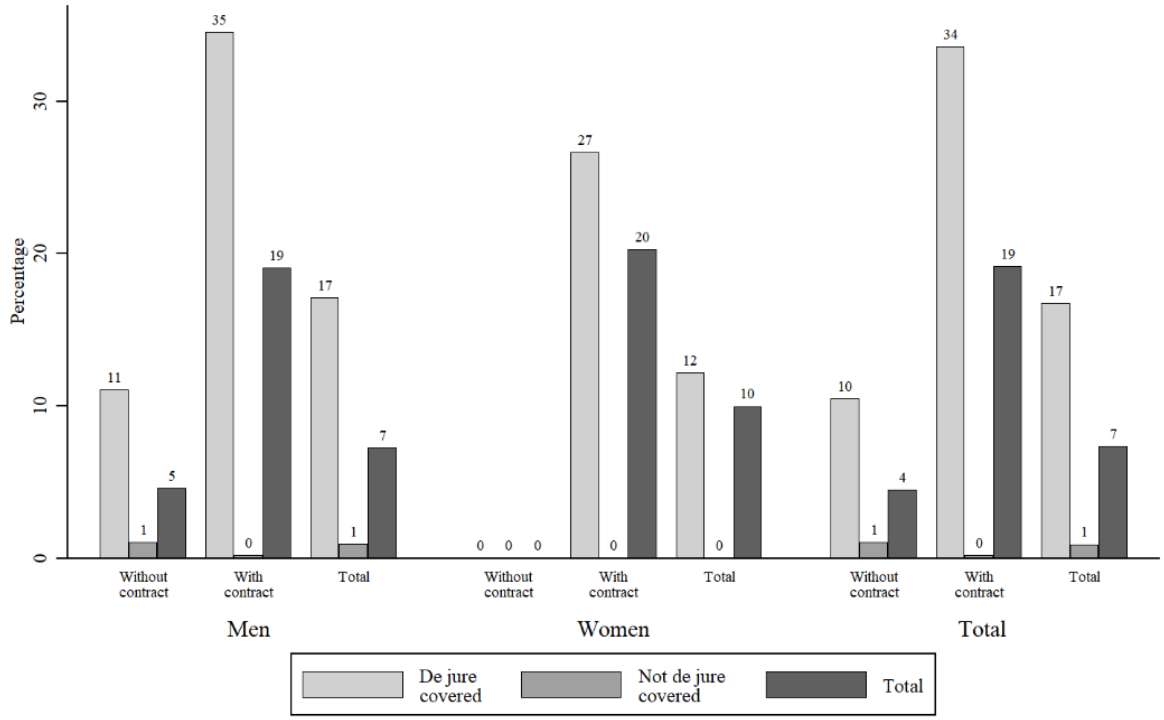
[18] Note that 60% of Jordanian employees and 26% of non-Jordanian employees have a written contract.

Figure 12: Structure of private sector wage employment among Jordanians according to existence of a written contract



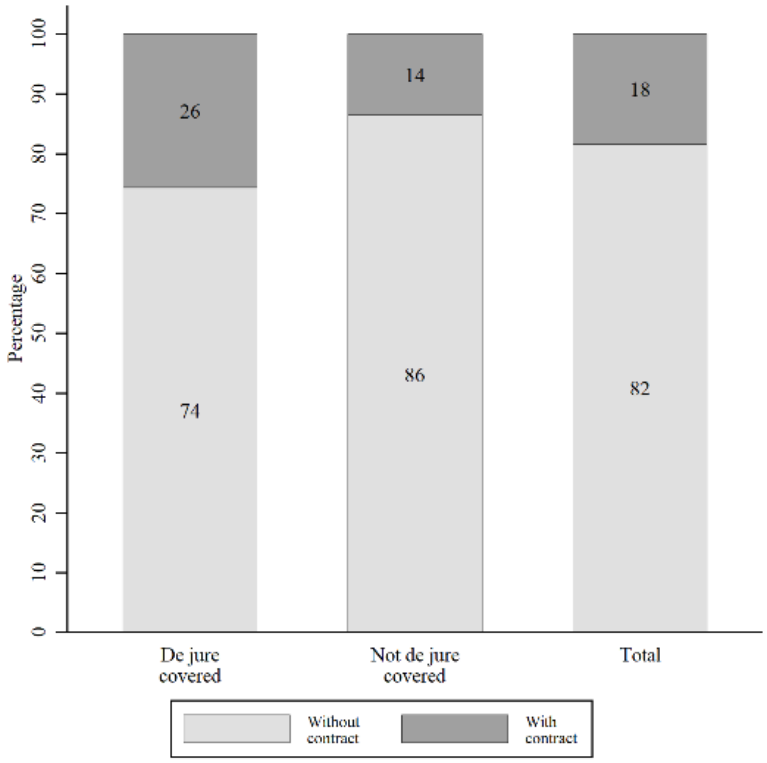
Source: Constructed by authors using JLMPS 2016

Figure 13: Social insurance coverage rates by whether there exists a written contract or not, sex, and nationality, non-Jordanian male wage workers in the private sector, JLMPS 2016, ages 15-59



Source: Constructed by the authors' using JLMPS 2016

Figure 14: Structure of private sector wage employment among non-Jordanian men according to existence of a written contract



Source: Constructed by the authors' using JLMPS 2016

Firm size

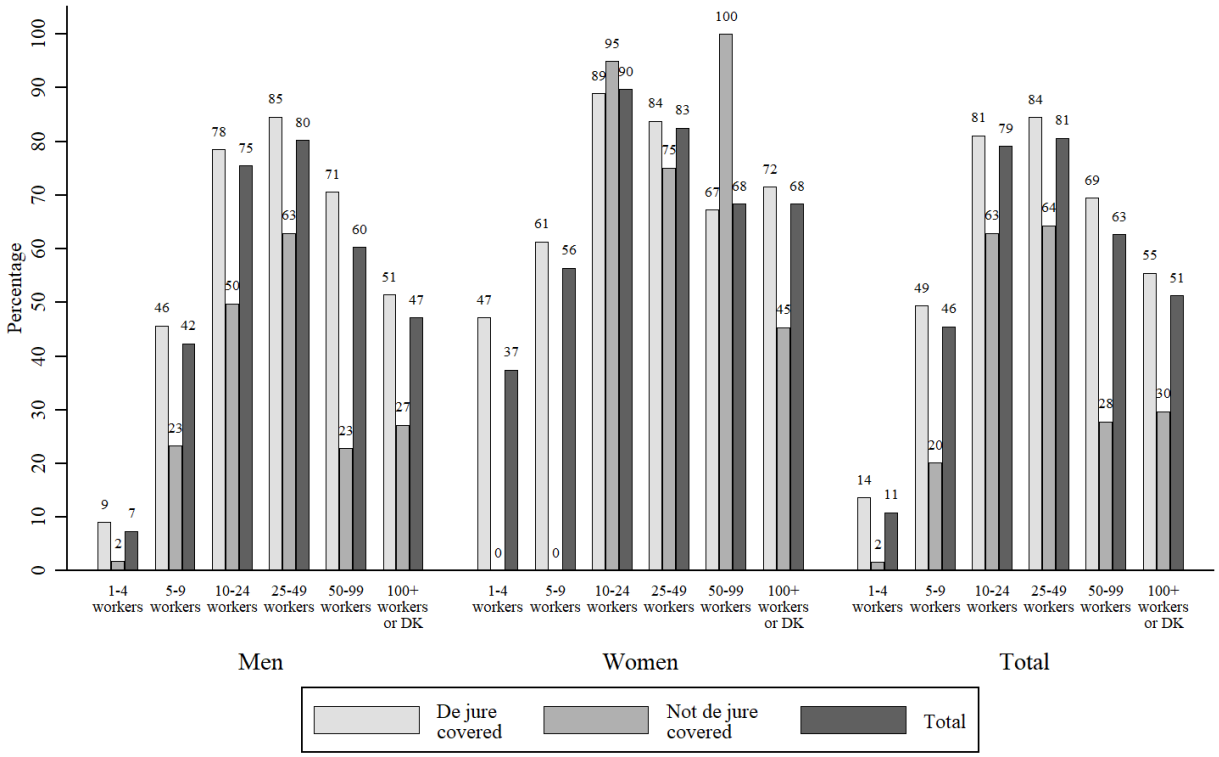
The law does not exempt small enterprises from providing coverage to their workers. Nevertheless, the Social Security Corporation refers to "stages in the application" of the law, starting with very large enterprises, later including enterprises with 50 or more workers. In 2010 a campaign was launched to apply the law to enterprises with fewer than 5 workers. (Twenty-seven percent of Jordanians and 71% of non-Jordanians work in enterprises with fewer than 5 workers.) The result was a significant increase in effective coverage among the workers in very small enterprises. Nevertheless, as of 2016 when the JLMPS data was collected, effective coverage rates continued to vary significantly by enterprise size.

As expected, effective coverage rates are lowest in very small enterprises. Perhaps surprisingly, very large enterprises have lower effective coverage rates than do medium size enterprises. Among Jordanians whose coverage is required, effective coverage is 14% in enterprises of less than 5 workers, peaks at 84% in enterprises of 25-49 workers, then falls back to 69% in enterprises of 50-99 workers.[19] Among non-Jordanians whose coverage is required, effective coverage is

[19] The category of enterprises with 100+ workers is combined in the survey with "don't know." As a result, that category of responses is difficult to interpret.

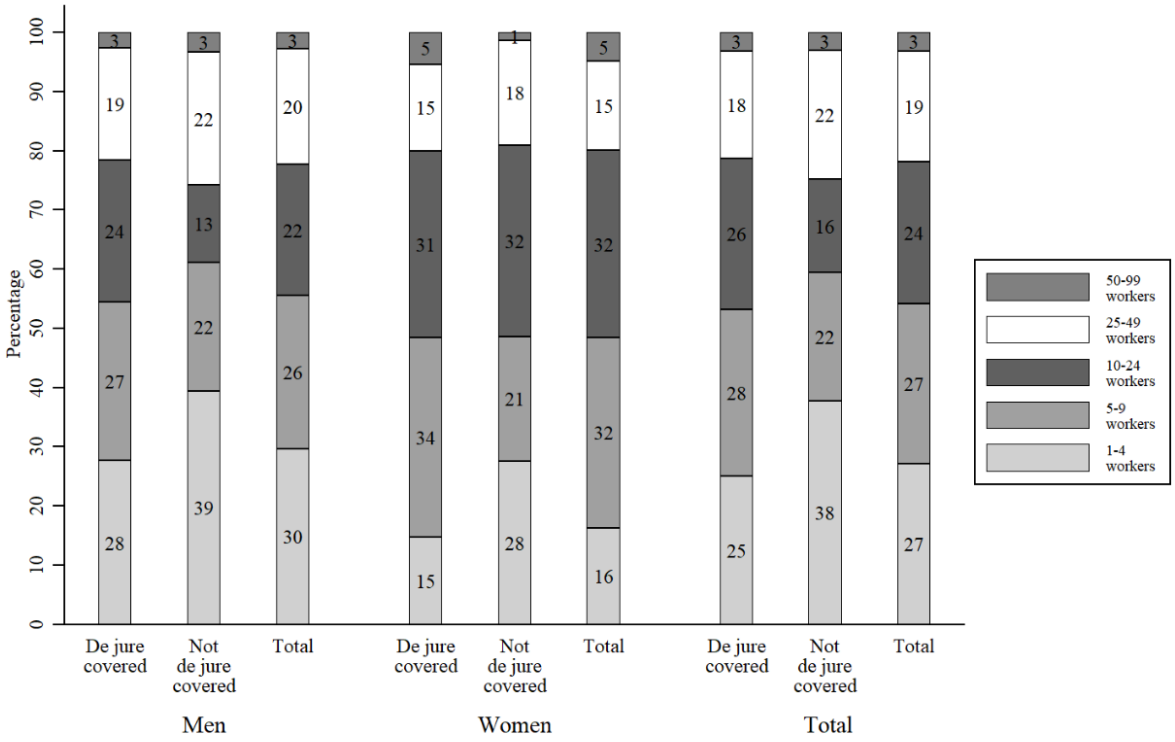
16% in enterprise of less than 5 workers and peaks at 30% in enterprises of 10-24 workers, falling to 10% in enterprise of 50-99 workers.

Figure 15: Social insurance coverage rates by firm size category and sex, Jordanian wage workers in the private sector, JLMPS 2016, ages 15-59



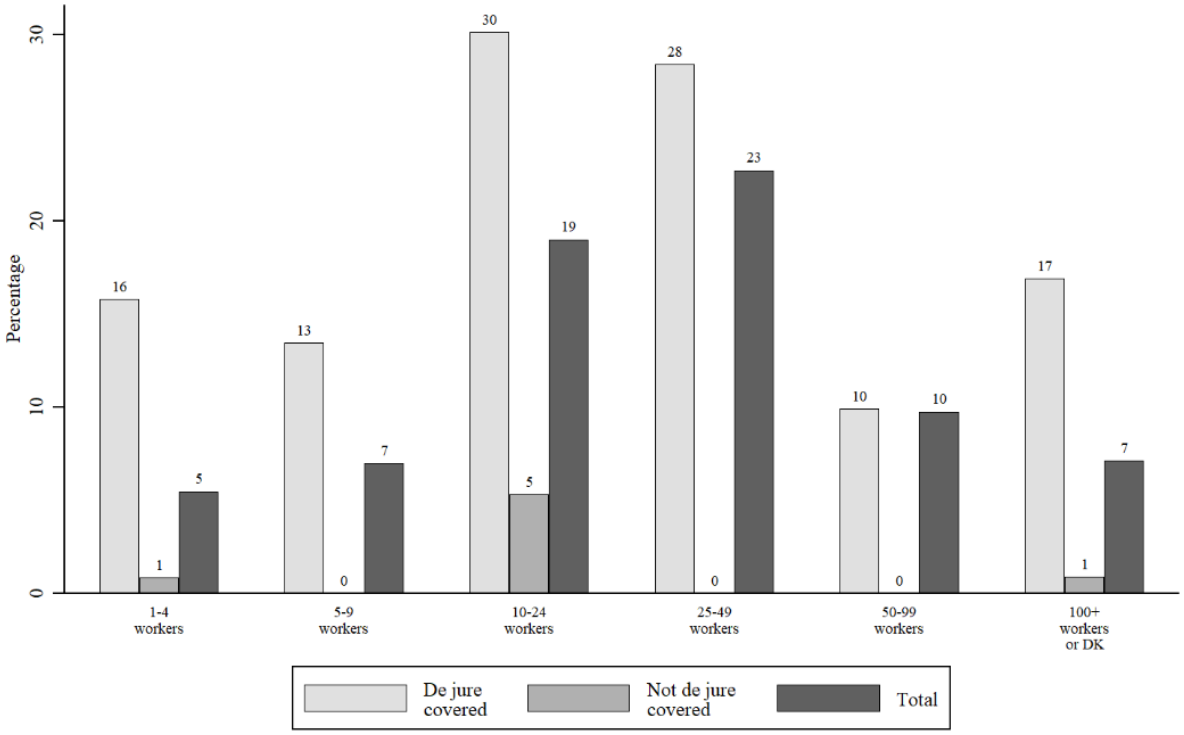
Source: Constructed by the authors' using JLMPS 2016

Figure 16: Structure of private sector wage employment among Jordanians according to firm size



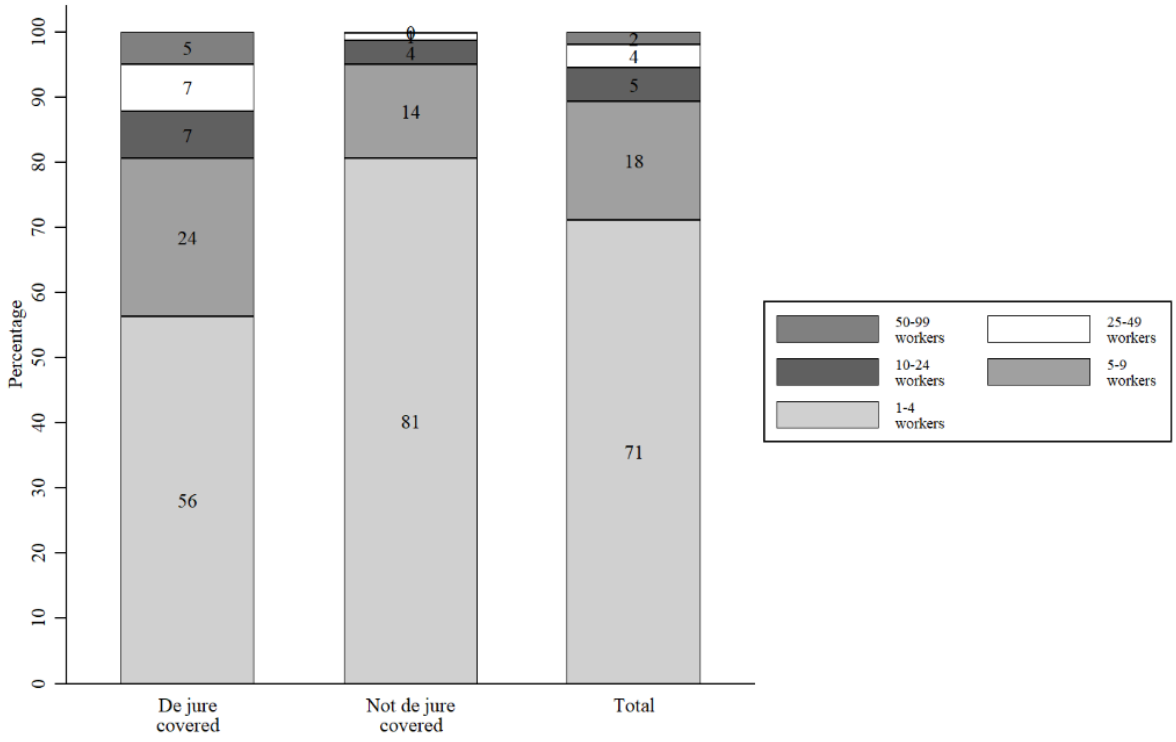
Source: Constructed by authors' using JLMPS 2016

Figure 17: Social insurance coverage rates by firm size category and sex, non-Jordanian male wage workers in the private sector, JLMPS 2016, ages 15-59



Source: Constructed by the authors' using JLMPS 2016

Figure 18: Structure of private sector wage employment among non-Jordanian men according to firm size



Source: Constructed by the authors' using JLMPS 2016

Work regularity and location

The JLMPS includes detailed information about work regularity and location. "Regular" refers to continuous work for the same employer and job, whereas "irregular" refers to work that is intermittent with various employers.[20] For "regular" work, the type of location is characterized as either "inside establishment" or "outside establishment." "Inside establishment" refers to offices, factories, restaurants, hotels and other similar locations. "Outside establishment" refers to construction sites and agricultural fields as well as mobile locations such as street vending and taxis.

Although the law governing required coverage uses the number of days worked per month as a criterion, there is no provision for workers who work 16 or more days per month but frequently shift from one employer to another.[21] In practice, therefore, it is difficult to enforce coverage for

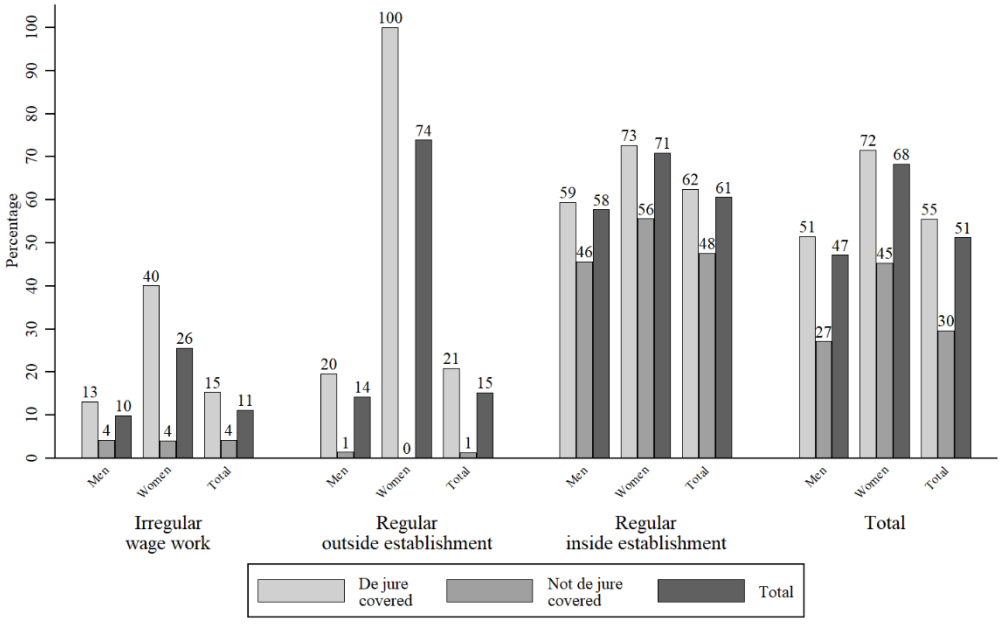
[20] 13% of Jordanian private sector wage workers are in irregular work. (28% of those not de jure and 10% of those de jure). 15% of non-Jordanian private sector wage workers are in irregular work (18% of those not de jure and 11% of those de jure)

[21] There is a widespread perception that a large share of non-Jordanians work in irregular employment – often referred to as day labor. This perception is not borne out in the data. Even in jobs in which coverage is not required (e.g., agriculture), only 18% have work that is intermittent with various employers. In jobs for which coverage is required, 11% on non-Jordanians are in 'irregular" employment.

workers in irregular employment. As expected, effective coverage rates are low for workers in irregular employment. Effective coverage is only 6% among Jordanians in irregular work, even if coverage is technically required. Effective coverage among non-Jordanians in this category are negligible.

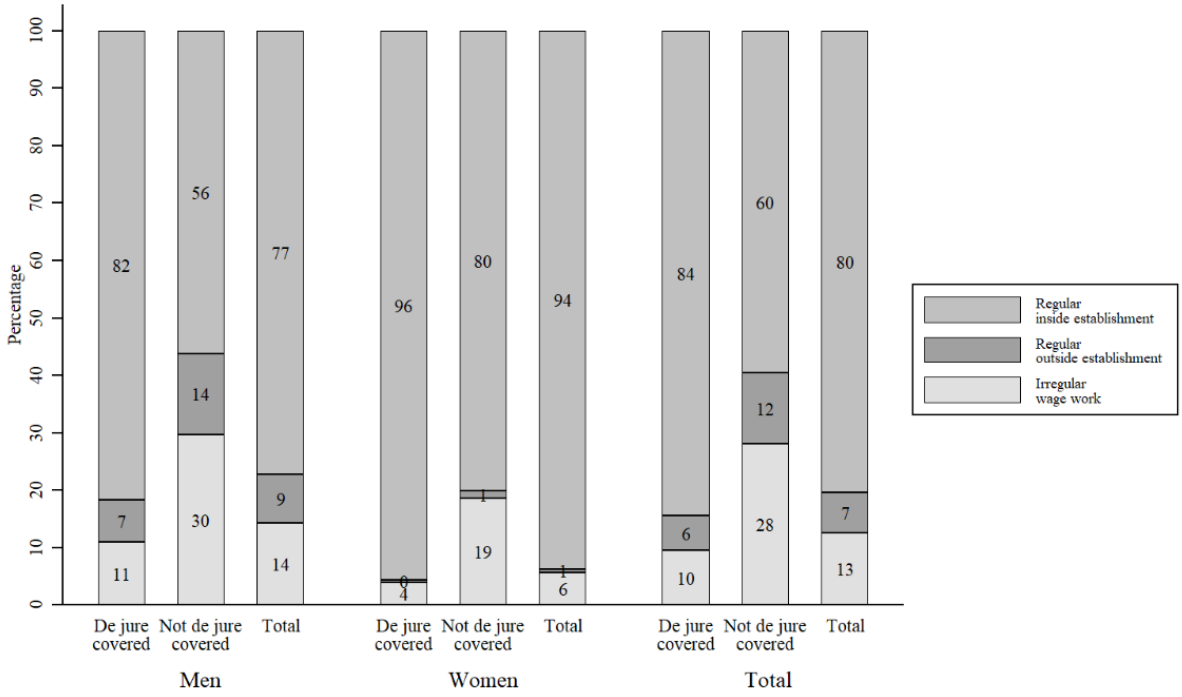
The location of work is a strong predictor of effective coverage. Among Jordanians whose work is required to be covered, 50% have effective coverage if their work location is "inside establishment" but only 9% if their work location is "outside establishment." The pattern is similar for non-Jordanians whose work is required to be covered: 22% are effectively covered if their work is "inside establishment" but only 4% if the work is "outside establishment."

Figure 19: Coverage rates according to regularity and location of work, Jordanian wage workers in the private sector, JLMPS 2016, ages 15-59



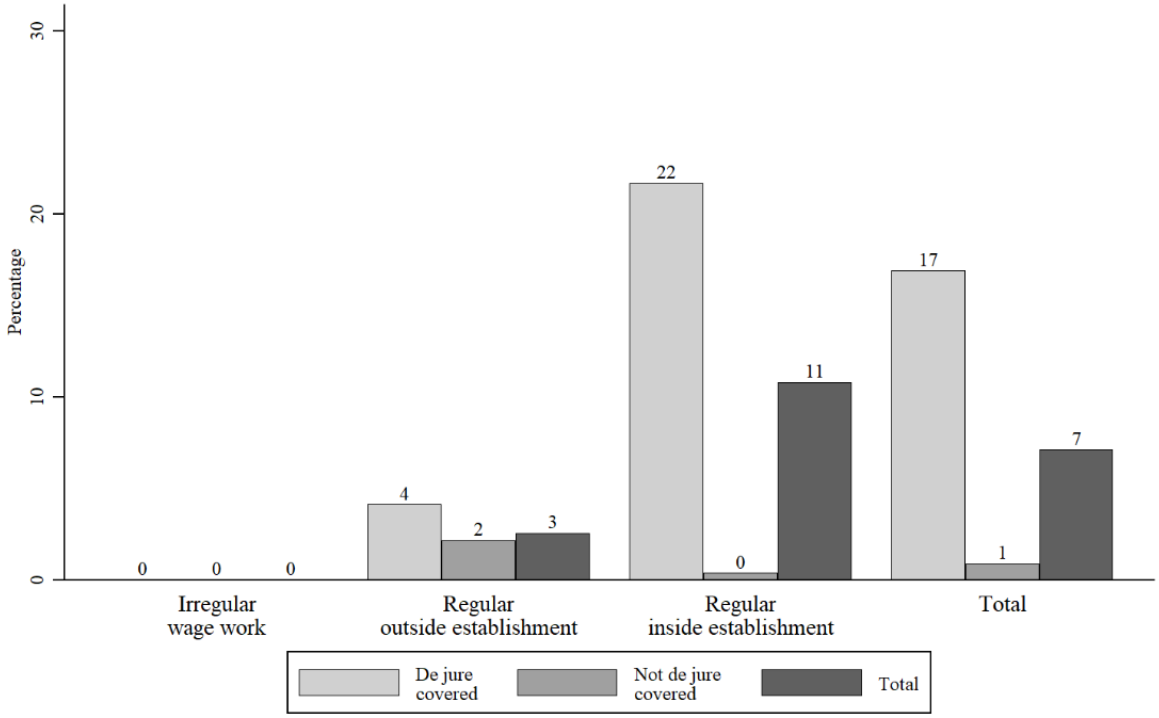
Source: Constructed by the authors' using JLMPS 2016

Figure 20: Structure of private sector wage employment among Jordanians according to regularity and location of work



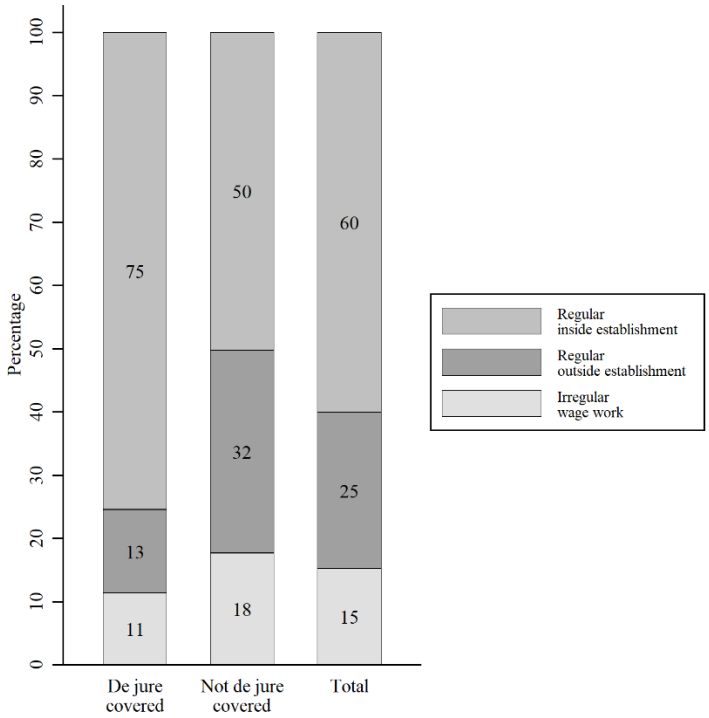
Source: Constructed by authors' using JLMPS 2016

Figure 21: Coverage rates according to regularity and location of work, non-Jordanian male wage workers in the private sector, JLMPS 2016, ages 15-59



Source: Constructed by the authors' using JLMPS 2016

Figure 22: Structure of private sector wage employment among non-Jordanian men according to regularity and location of work



Source: Constructed by the authors' using JLMPS 2016

Multivariate analysis: Determinants of social insurance coverage

The figures above indicate that there are several factors that are strong predictors of coverage rates, such as sector and nationality. Although the figures are useful for identifying characteristics of jobs for which and workers for whom social security coverage is lacking, further analysis is needed for two reasons. First, it is important to distinguish between gaps in legislation and gaps in compliance. The remedy for gaps in legislation is changes in laws and regulations, whereas the remedy for gaps in compliance is enhanced enforcement and information. Second, because factors that predict coverage rates are often correlated with each other, it is difficult to know which factors are most important.

The analysis below addresses both of these concerns. Table 1 shows the results of a logit regression estimating odds ratio for having social insurance coverage among two groups of wage workers: (1) all wage workers in the private sector, whether or not their jobs provide legal coverage, and (2) wage workers in the private sector whose jobs provide legal coverage, i.e., among the *de jure covered*. We also estimate the probability of social insurance coverage

separately for men and women for those two groups of wage workers (all workers, and the de jure covered). Results of these models are shown in Appendix Table 1.[22]

Table 1 shows the results for all private sector wage workers, whether or not their jobs provide legal coverage, in columns 1 and 2, and for only wage workers whose jobs require coverage in columns 3 and 4. Coefficients greater than 1 indicates odds ratio that are higher than the reference category (positive association/effect) whereas coefficients lower than one indicates odds ratio that are lower than the reference category (negative effect/association). Many of the factors that appeared to be important for effective coverage in the descriptive analysis are significant in the multivariate analysis as well. That is, these factors are significant even when we control for a wide range of other factors. In particular, the following factors are strong predictors of effective coverage: sector,[23] size of firm,[24] existence of a written contract, and regularity of employment.[25] These factors may be useful to guide SSC enforcement efforts or to reconsider regulations (see the final section on policy implications). In addition, formality of the firm (which was not included in the descriptive analysis) is significant in the regressions. In the absence of good data on firm registration, we use effective coverage of other workers in the same firm as a proxy for firm formality. The importance of firm formality is highlighted by the fact that among Jordanian men in private wage-work, 69% are in informal firms.[26]

The regressions are also informative in terms of the factors that are not significant predictors of coverage. Descriptively, we noted earlier that there are substantial differences in effective coverage by gender and nationality: among all wage workers, 83% of Jordanian women are effectively covered, compared to 71% of Jordanian men and 9% of non-Jordanians. Among private sector wage workers, 69% of Jordanian women are effectively covered compared to 47% of Jordanian men and 8% of non-Jordanian men.) Given these disparities, it is noteworthy that neither gender nor nationality were significant predictors of coverage once controlling for other factors. In other words, the especially high coverage among Jordanian women and the especially low coverage among non-Jordanians is due to the types of jobs they hold rather than directly to their gender or nationality. The implication of the nationality issue in particular, is that Jordanians in those same jobs are also not effectively covered. The fact that Jordanians are not in those jobs

[22] Many of the coefficients that are significant for men are insignificant for women including regularity, existence of written contract, sector, micro firms (1-4 workers) and firm informality. The lack of significance of these coefficients is consistent with the fact that very few women work in those jobs as highlighted in the previous paragraph.
[23] Some sectors are very much disadvantaged in terms of coverage - namely wholesale and retail trade, transportation and storage, and other services, controlling for job characteristics (occupation, regularily, etc.).
[24] The most disadvantaged in the private sector are wage workers in micro firms (1-4 workers) and small firms (5-29 workers), who have significantly lower probabilities of being socially insured than those in medium firms (25-99 workers).
[25] Although length of time in the current job (tenure) is not a significant predictor of effective coverage, tenure squared is significant. This finding is consistent with the findings in the next section which show that it is very rare for a worker to be given coverage after starting a job: either the job provides coverage from the beginning or not at all.
[26] Among Jordanian women in private wage-work, 30% are in informal firms. Among non-Jordanians in private wage work 84% are in informal firms.

is likely a reflection on the quality of the jobs (including lack of effective coverage). If so, improving the quality of the jobs could help get Jordanians into the available private sector jobs.

In a second specification, for each of our two groups of private sector wage workers (all wage workers, and the de jure covered), we also include interactions between the following explanatory variables (irregularity, having a contract, firm informality) and firm size. These interactions test whether and how the effect of each of those explanatory variables on the probability of having social insurance coverage is different depending on the firm size. The probability of having social insurance coverage appears to decrease more in micro firms (1-4) for irregular jobs than regular jobs. This means that irregular workers in micro firms have significantly reduced probabilities than their peers in micro firms who work on regular basis. This is like the negative and significant interaction of having no contract and firm size: those who have no contracts in larger firms are significantly less likely to have social insurance coverage than those who have contracts in larger firms.

Keeping in mind those interactions, there are interesting differences in the main effect of irregular work, that of having a contract. Both main effects become insignificant when we include interactions with firm size. This suggests that irregular work is not associated with significantly reduced coverage on average, but rather for the specific group who work in micro firms. Same explanations apply to workers with no contract, where on average its main effect became insignificant highlighting a disadvantage for a particular group of workers: the non-contracted employees in large firms. The main effects of the firm size remain significant in specifications with interactions, demonstrating that workers in micro and small firms are on average less likely to be covered than those in medium firms.

Table 1: Logit models (odds ratios) for having social insurance coverage, wage workers in the private sector by sex, Jordanian and non-Jordanians, ages 15-59

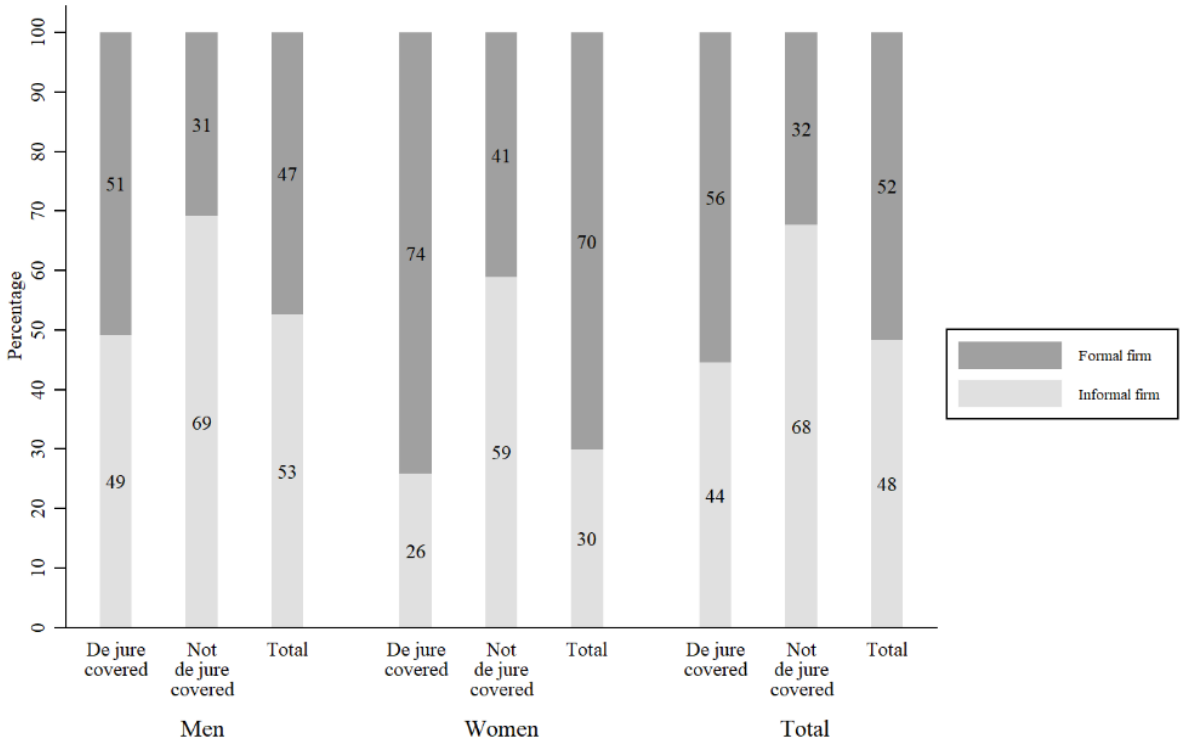
	All private sector wage work		**The *de jure* private sector wage work**	
	(1) (spec.1)	(2) (spec.2)	(3) (spec.1)	(4) (spec.2)
Age group (15-24 omit.)				
25-34	0.819	0.844	0.871	0.895
	(0.253)	(0.260)	(0.252)	(0.263)
35-44	0.780	0.795	0.759	0.822
	(0.316)	(0.322)	(0.306)	(0.338)
45-60	0.632	0.651	0.674	0.718
	(0.267)	(0.286)	(0.305)	(0.339)
Gender (Men omit.)				
Female	1.617	1.781*	1.433	1.678
	(0.473)	(0.509)	(0.409)	(0.480)
Education level (none omit.)				
Below Secondary	0.986	1.043	0.870	0.980
	(0.298)	(0.330)	(0.277)	(0.352)
Secondary	1.183	1.328	1.029	1.277
	(0.349)	(0.394)	(0.354)	(0.452)
University and Above	1.755	2.023	1.512	1.979

	(0.666)	(0.753)	(0.669)	(0.891)
Region (Middle omit.)				
North	0.884	0.857	0.683	0.663
	(0.203)	(0.208)	(0.165)	(0.169)
South	1.985	2.029	1.509	1.533
	(1.043)	(1.089)	(0.760)	(0.795)
Urban/Rural (urban omit.)				
Rural	3.356*	3.374*	3.629	3.492*
	(1.854)	(1.737)	(2.402)	(2.141)
Inside/outside establishment (Inside establishment omit.)				
Outside estab. private wage	0.468	0.468	0.401	0.461
	(0.249)	(0.236)	(0.210)	(0.238)
Irregular work (regular omit.)				
Yes	0.255***	0.059*	0.187***	0.519
	(0.104)	(0.083)	(0.085)	(0.384)
Contract (contracted omit.)				
No	0.528*	0.795	0.497**	0.770
	(0.136)	(0.369)	(0.125)	(0.383)
Economic Activity (agriculture omit. cols 1-2; broad manufacturing omit. cols 3-4)				
Broad Manufacturing	28.965***	29.468***		
	(22.637)	(23.907)		
Construction	18.236***	22.493***	0.685	0.850
	(13.258)	(17.200)	(0.334)	(0.390)
Wholesale & retail trade & food & accommodation	16.393***	17.507***	0.509*	0.558
	(13.506)	(14.517)	(0.162)	(0.182)
Transp. storage & communication	5.153*	5.639*	0.246**	0.294*
	(4.247)	(4.720)	(0.126)	(0.158)
Other Services	7.898**	9.035**	0.297***	0.371**
	(5.376)	(6.364)	(0.102)	(0.131)
Occupation (professionals & assoc. prof. omit.)				
Clerical and sales	0.569	0.535	0.666	0.619
	(0.228)	(0.209)	(0.265)	(0.240)
skilled agricultural & craft & trade workers	0.665	0.705	0.654	0.800
	(0.297)	(0.322)	(0.319)	(0.381)
Plant & machine & elementary workers	0.514	0.540	0.551	0.614
	(0.235)	(0.243)	(0.278)	(0.301)
Hours of work (<35 hours omit.)				
35-48 hours	1.481		1.309	
	(0.445)		(0.454)	
49+ hours	0.977		0.714	
	(0.337)		(0.280)	
Tenure (years spent in the same job)				
Tenure squared	1.085	1.079	1.085	1.083
	(0.051)	(0.050)	(0.052)	(0.054)
tenuresq	0.997*	0.997	0.997*	0.997
	(0.001)	(0.001)	(0.002)	(0.002)
Monthly wage quintiles (First quintile omit.)				
Second quintile	1.054	1.019	1.022	0.922
	(0.352)	(0.323)	(0.352)	(0.321)
Third quintile	0.899	0.841	0.887	0.747
	(0.345)	(0.328)	(0.352)	(0.305)
Fourth quintile	1.586	1.524	1.391	1.224
	(0.668)	(0.649)	(0.633)	(0.572)
Fifth quintile	1.482	1.408	1.391	1.216
	(0.451)	(0.441)	(0.453)	(0.422)
Firm size (medium (25-99 workers) omit.)				
Micro (1-4 workers)	0.110***	0.121***	0.132***	0.166**
	(0.036)	(0.073)	(0.047)	(0.106)

Small (5-24 workers)	0.264***	0.332**	0.280***	0.320**
	(0.075)	(0.135)	(0.081)	(0.129)
Large (100+ workers/DK)	1.516	4.103**	1.813	4.710***
	(0.491)	(1.787)	(0.608)	(2.149)
Informal firm (formal firm omit.)				
Informal firm	0.346***	0.503	0.403***	0.682
	(0.081)	(0.201)	(0.095)	(0.282)
Days of work/month (<16 days/month omit.)				
16+ days/month	1.930	1.775		
	(0.674)	(0.603)		
Nationality (Jordanian omit.)				
Egyptian	0.986	0.975	1.810	1.718
	(0.797)	(0.789)	(1.660)	(1.506)
Other Arab	0.423*	0.420*	0.488	0.471
	(0.166)	(0.165)	(0.192)	(0.182)
Irregular and firm size int.				
Yes # Micro (1-4 workers)		0.147		0.026**
		(0.249)		(0.034)
Yes # Small (5-24 workers)		6.307		0.582
		(9.410)		(0.502)
Yes # Large (100+ workers/DK)		7.745		
		(11.487)		
No contract and firm size int.				
No # Micro (1-4 workers)		0.966		0.727
		(0.732)		(0.565)
No # Small (5-24 workers)		0.734		0.887
		(0.406)		(0.519)
No # Large (100+ workers/DK)		0.208*		0.194*
		(0.142)		(0.145)
Informal firm and firm size int.				
Informal firm # Micro (1-4 workers)		0.573		0.488
		(0.395)		(0.324)
Informal firm # Small (5-24 workers)		0.634		0.490
		(0.353)		(0.296)
Informal firm # Large (100+ workers/DK)		0.524		0.380
		(0.309)		(0.251)
p	0.000	0.000	0.000	0.000
N	1784	1797	1413	1415
Pseudo R-squared	.5017209	.507735	.407295	.4084739

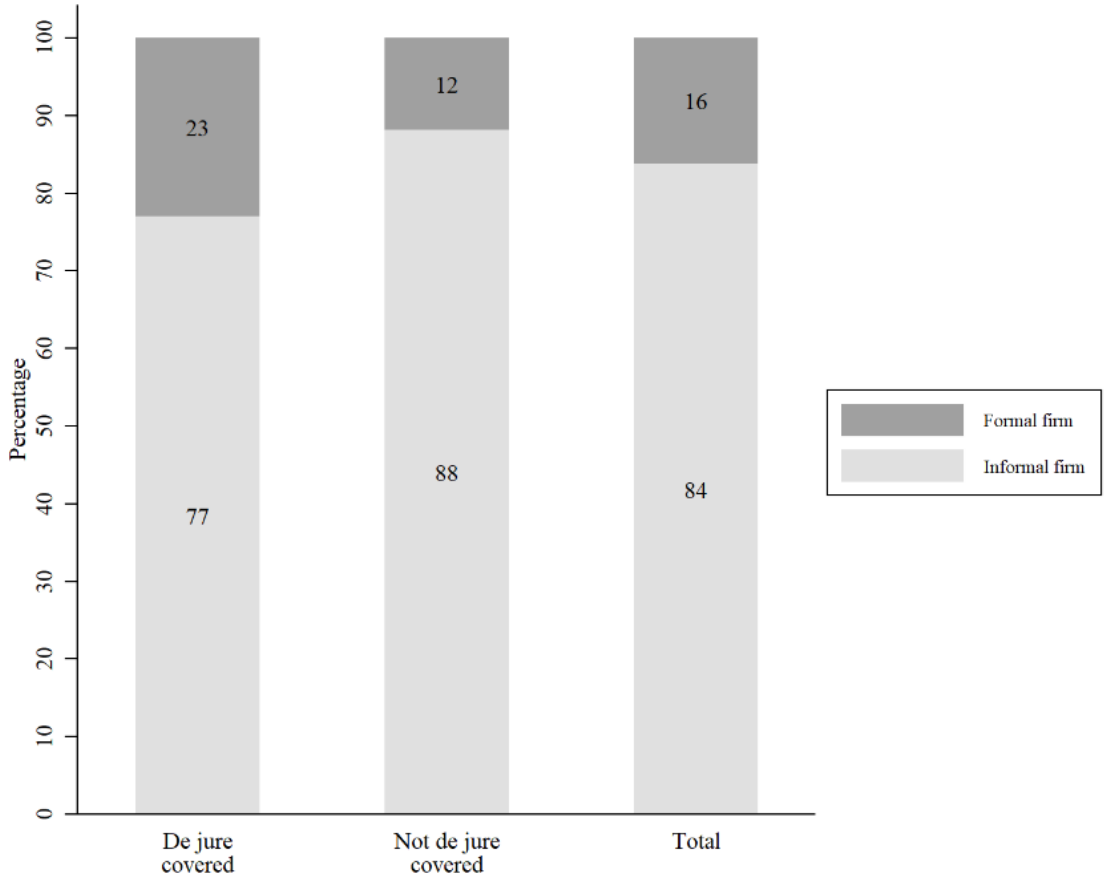
Source: Authors' calculations based on JLMPS 2016
Note: *p < 0.05, **p < 0.01, ***p < 0.001

Figure 23: Structure of private sector wage employment among Jordanians according to firm formality



Source: Constructed by the authors' using JLMPS 2016

Figure 24: Structure of private sector wage work among non-Jordanian men according to firm formality

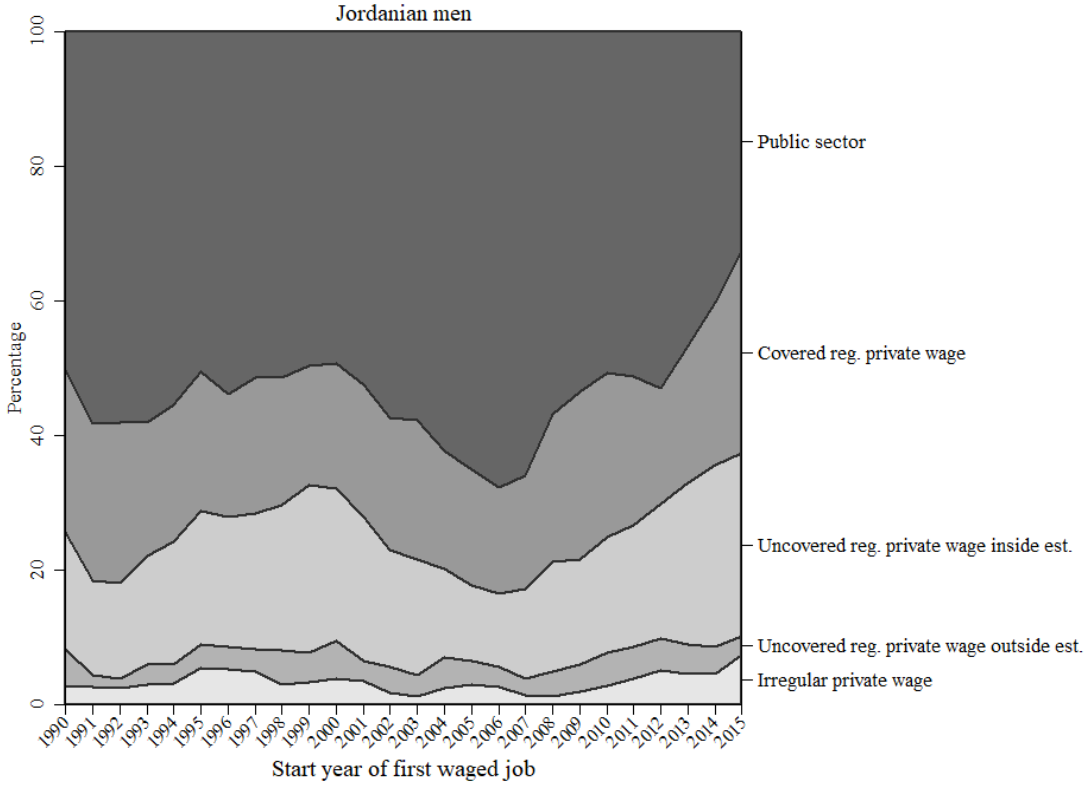


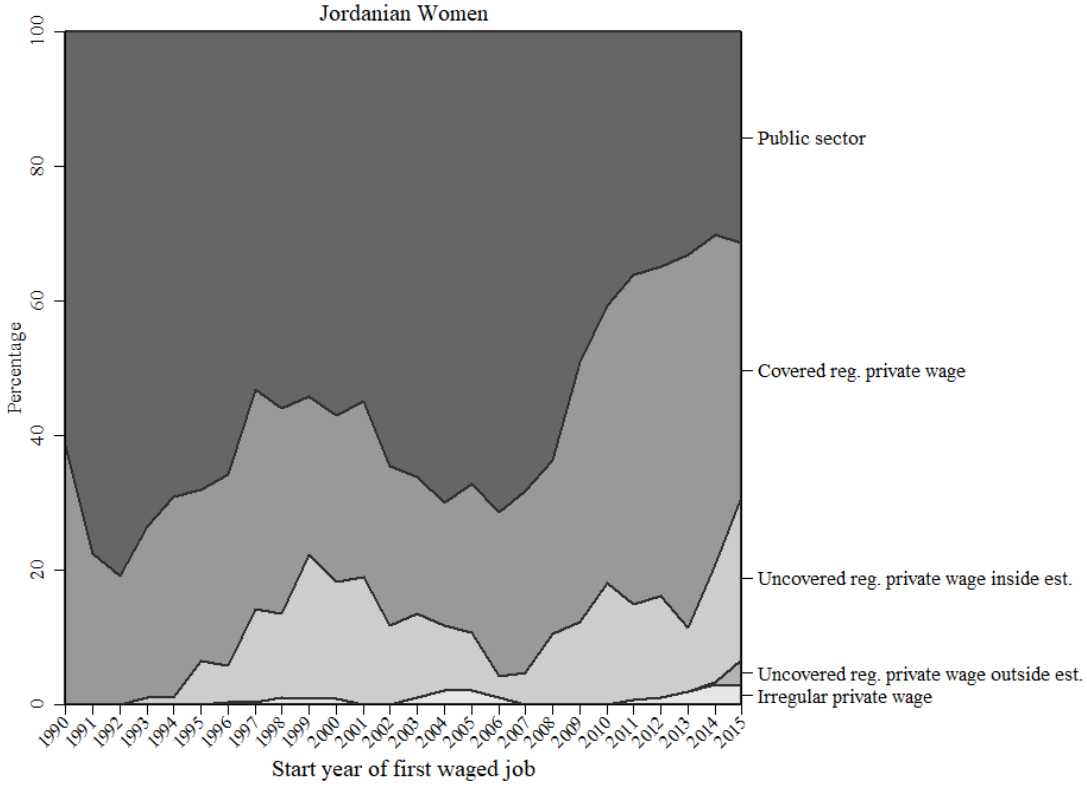
Source: Constructed by the authors' using JLMPS 2016

Section 5: Transitions into and out of coverage

In this section, we analyze transitions into and out of effective coverage. Over the past 15 years, it has become increasingly difficult for Jordanian youth to obtain a first job that provides effective coverage. Figure 25 shows trends in effective coverage in the first jobs held by Jordanian men and women. It shows that since 2006, the share of first jobs providing effective coverage fell from about 80% to about 60%. Jordanian women exhibit the same trend for their first jobs in wage work and indicates that over the same time period, the share of women whose first waged job provided effective coverage fell from about 95% to about 75%.

Figure 25: The structure of first waged jobs (percentage) by year of first waged job, from 1990 to 2015 for Jordanians, three-year moving average, JLMPS 2016





Source: Constructed by the authors' using JLMPS 2016

Next, we examine the extent to which workers have been able to transition into jobs that provide effective coverage.[27] We make use of the fact that the JLMPS interviewed the same individuals in 2010 and then again in 2016.

Table 2shows the status of Jordanian workers in 2010 (rows) and their status in 2016 (columns).

Few workers are able to shift from jobs lacking coverage to private sector jobs that provide coverage. Among Jordanian men in private wage employment who lacked coverage in 2010, only 12% moved into comparable jobs that provided coverage by 2016. Among Jordanian women, only 6% moved into comparable jobs providing coverage. The majority (52%) of women who were in informal wage employment in the private sector in 2010 left the labor force by 2016.[28]

Moreover, obtaining a private sector job that provides coverage does not guarantee the employee will remain covered. Among Jordanian men with private sector wage employment with coverage in 2010, 17% moved into comparable jobs without coverage by 2016. Among Jordanian women, 7% moved into comparable jobs without coverage.

[27] Overall, the share of employees (including both private and public sector) increased from 84% of Jordanian workers on 2010 to 89% in 2016. During this same period, the coverage rate fell from 73% of Jordanian employees to 67%. Meanwhile, coverage rates increased among Jordanian employers (from 6% to 16%) and among Jordanian own-account workers (from 1% to 5%). (The share of employers decreased from 6% to 4% and the share of own-account workers decreased from 10% to 8% among Jordanian workers between 2010 and 2016.)

[28] Transition tables showing Jordanians by age categories are available in the annex.

Table 2: Transition (in %) between different employment statuses from 2010 and 2016, JLMPS panel data, Jordanians only, ages 21-59 in 2016

2010 (origin - vertical) /2016 (destination - horizontal)	Out of the labor force	Broad unemployed	Unpaid family work	Self-employed	Employer	Socially uninsured private wage	Socially insured private wage	Public sector	Total (%)	N	Distribution (%) in 2010	Distribution (%) in active population in 2010
Men												
Out of the labor force	26.00	13.50	0.30	4.10	1.30	12.30	23.00	20.00	100	1203	31.8	
Broad unemployed	16.00	15.70	0.80	7.80	3.80	19.50	6.00	31.00	100	272	7.2	10.5
Unpaid family work	26.00	23.40	0.00	11.60	0.00	9.30	16.00	14.00	100	23	0.6	0.9
Self-employed	20.50	3.80	0.50	34.70	6.00	22.90	4.00	8.00	100	219	5.8	8.5
Employer	13.60	2.50	0.40	18.90	26.10	20.90	16.00	2.00	100	105	2.8	4.1
Socially uninsured private wage	12.80	7.50	0.50	13.60	7.40	38.00	12.00	8.00	100	463	12.2	18.0
Socially insured private wage	12.40	2.70	0.30	9.30	1.60	17.40	43.00	13.00	100	333	8.8	12.9
Public sector	15.20	3.20	0.60	2.10	1.20	3.20	5.00	69.00	100	1164	30.8	45.1
Total	18.30	8.00	0.50	8.60	3.70	16.20	17.00	28.00	100	3782	100.0	100.0
Women												
Out of the labor force	80.6	9.3	1.1	0.6	0	1.9	4	2	100	2971	80.3	
Broad unemployed	43.3	28.4	1.2	1.3	0.4	2.2	5	18	100	179	4.8	24.5
Unpaid family work	80.2	6	5.1	0	0	1.5	2	5	100	72	1.9	9.8
Self-employed	81.9	12.2	0	3.6	0	2.3	0	0	100	22	0.6	3.0

Employer	85.7	0	0	5.5	5.5	3.3	0	0	100	7	0.2	1.0
Socially uninsured private wage	52	10.5	0	0	1.1	27.9	6	2	100	71	1.9	9.7
Socially insured private wage	43.1	3.4	0	0.6	0	7.3	37	8	100	103	2.8	14.1
Public sector	20.3	2.4	0.7	0	0	1.6	2	73	100	277	7.5	37.9
Total	73.6	9.4	1.1	0.6	0.1	2.7	5	7	100	3702	100.0	100.0

Source: Authors' calculations based on JLMPS 2016

In light of the difficulty shifting from uncovered to covered jobs within the private sector and the risk of losing coverage, it is not surprising that public sector employment remains desirable and once a worker obtains it, they rarely leave. Among men, 69% of those in public sector employment in 2010 were still there in 2016. Of those who left, the largest group (15%) left the labor force. Only 5% left public employment to go to private formal employment. Among women, 73% of those in public employment in 2010 were still there in 2016. Of those who left, the largest group (20%) left the labor force. Only 2% left to go to formal private wage employment.

Section 6: How Important Is Coverage To Workers? Section 6: How Important is Coverage to Workers?

Section 6: How Important is Coverage to Workers?[29]

Successful establishment of a new social contract requires policy makers to understand the priorities of the population. Specifically, regarding the shift from heavy reliance on public sector employment to private sector employment, two related questions are essential.

- What job characteristics would private sector jobs need to have to make them as appealing to workers as public sector jobs have been?
- And how important are the social insurance aspects of public sector jobs (e.g., insurance against old age, disability, maternity, and sudden shocks) relative to other characteristics of public sector employment (e.g., the public sector wage premium, and working conditions)?

For the past several decades, the government has believed that the main feature that attracts workers to public employment is the social insurance: this understanding has underpinned the government's focus on social security coverage as a way to make workers willing to forgo public employment. If, on the other hand, the attractiveness of public employment is based on the other characteristics (e.g., wage premium and working conditions) efforts will be needed to level the playing field along these lines. Relatedly. Globally, the literature on social protection generally posits that workers want coverage and that the main challenge is enforcing compliance of employers.[30] The policy implications are different, however, if workers do not place a high value on coverage. In the extreme situation, workers may prefer to forgo coverage in order to avoid

[29] Preliminary investigations into the JLMPS data on reservation wages was inconclusive. This is an area for further work.

[30] Employers have a clear financial incentive to hire workers informally (without coverage) in order to minimize the cost of labor.

paying the workers' contribution to coverage. If this is the case, employees and employers may collude to avoid compliance. Even in a less extreme situation, employers may be willing to pay higher wages to workers in exchange for lack of coverage.[31]

We make use of the questions on job satisfaction that includes overall job satisfaction in the job and satisfaction in specific areas of the job: job security, earnings, work conditions, match with qualifications, hours of work, etc. We factor those questions on satisfaction using polychoric factor analysis.[32] The higher the factor the greater the job satisfaction is.

What seems to matter significantly in determining job satisfaction is job regularity and monthly wage for overall wage workers (public sector, private sector, private sector de jure covered). Irregular wage workers have significantly lower satisfaction levels than those in regular wage employment. Also, higher wage quintiles are associated with higher satisfaction. Wage workers in elementary occupations seem to be significantly less satisfied than professionals and associate professionals. For wage workers in the private sector who should be covered by law, in addition to job regularity and monthly wage, all occupations other than professionals and associate professionals are associated with lower satisfaction level.

There are several interesting points to note from the regressions.

- Irregularity of employment and elementary occupations are the only two variables that are consistently significant across all specifications. Note that irregularity refers to frequent changes of employer rather than to the number of days worked per month (which we control for as a separate variable).
- Effective coverage is significant only when we limit the sample to workers whose jobs are required to be covered. This finding may indicate that only those whose jobs are required to be covered have an expectation of coverage and are therefore dissatisfied if they are not effectively covered. Alternatively, it could indicate that the other groups do not put relatively high value on effective coverage. This is possible because the quality of jobs that the law do not cover can be quite compromised in terms of many aspects including safety, pay, and working conditions, and thus workers consider pace relatively less value on social security in this mix of aspects.
- As expected, workers in higher monthly wage quintiles have higher job satisfaction than those in lower wage quintiles. Interestingly, wage quintiles are not significant when we limit the sample to workers whose jobs are required to provide coverage. We suggest two possible interpretations of this finding: (i) social insurance is an important supplement to wages such that those who are de jure covered are less sensitive to their wage level or (ii) jobs that require coverage are mostly high wage jobs already.

[31] From a strictly financial perspective, employers will be willing to pay workers an additional amount up to the employer's contribution to social security.
[32] Details on the factor analysis of job satisfaction are available upon request.

- Interestingly, firm size is not significant, suggesting that job satisfaction is related to patterns of work, namely irregularity, monthly wage quintiles, and having social security coverage. Therefore, once controlling for these variables, firm size does not have a direct association with job satisfaction levels.
- Interestingly, women and workers in rural areas have higher job satisfaction when including the full sample, but these coefficients lose significance in the de jure sample. This finding may reflect the fact that women tend to select into public sector employment and that rural employment has a large public sector component.

Table 3: OLS regression coefficients of job satisfaction, Jordanian and non-Jordanian wage workers, JLMPS 2016, ages 15-59

	(1) All wage workers	(2) Private sector wage workers		(3) Private sector de jure covered
Age group (15-24 omit.)			**Age group (15-24 omit.)**	
25-34	-0.068	-0.107	25-34	-0.247
	(0.093)	(0.133)		(0.158)
35-44	-0.046	-0.071	35-44	-0.167
	(0.097)	(0.129)		(0.128)
45-60	0.039	0.033	45-60	-0.150
	(0.111)	(0.159)		(0.183)
Gender (Men omit.)			**Gender (Men omit.)**	
Female	0.117*	0.168	Female	0.083
	(0.055)	(0.098)		(0.090)
Education level (none omit.)			**Education level (none omit.)**	
Below Secondary	-0.096	-0.168	Below Secondary	-0.122
	(0.083)	(0.106)		(0.116)
Secondary	-0.136	-0.175	Secondary	-0.119
	(0.094)	(0.117)		(0.136)
University and above	-0.115	-0.109	University and above	-0.170
	(0.113)	(0.149)		(0.175)
Region (Middle omit.)			**Region (Middle omit.)**	
North	0.096	0.153	North	0.100
	(0.064)	(0.105)		(0.105)
South	0.095	0.145	South	0.082
	(0.057)	(0.098)		(0.088)
Urban/Rural (urban omit.)			**Urban/Rural (urban omit.)**	
Rural	0.153***	0.187*	Rural	0.153
	(0.039)	(0.081)		(0.104)
Inside/outside establishment (Inside establishment omit.)			**Inside/outside establishment (Inside establishment omit.)**	
Outside estab. private wage	-0.259	-0.153	Outside estab. private wage	-0.205
	(0.142)	(0.134)		(0.174)
Inside estab. private wage	-0.075		Inside estab. private wage	
	(0.065)			
Irregular work (regular omit.)			**Irregular work (regular omit.)**	

Yes	-0.585***	-0.610***	Yes	-0.601***	
	(0.134)	(0.139)		(0.150)	
Contract (contracted omit.)			**Contract (contracted omit.)**		
No	0.074	0.148	No	0.109	
	(0.060)	(0.100)		(0.119)	
Social security coverage (uninsured omit.)			**Social security coverage (uninsured omit.)**		
Soc. Insured	0.083	0.057	Soc. Insured	0.190*	
	(0.085)	(0.102)		(0.088)	
Economic activity sector (Agriculture/domestic work omit.)			**Economic activity sector (Broad manuf. omit.)**		
Broad Manufacturing	-0.172	-0.063	Broad Manufacturing		
	(0.183)	(0.210)			
Construction	-0.389	-0.346	Construction	-0.188	
	(0.204)	(0.229)		(0.228)	
Wholesale & retail trade & food & accommodation	-0.295	-0.198	Wholesale & retail trade & food & accommodation	-0.127	
	(0.190)	(0.223)		(0.101)	
Transp. storage & communication	-0.188	-0.166	Transp. storage & communication	-0.183	
	(0.201)	(0.233)		(0.167)	
Other Services	-0.210	-0.147	Other Services	-0.056	
	(0.162)	(0.193)		(0.113)	
Occupation (professionals & assoc. prof. omit.)			**Occupation (professionals & assoc. prof. omit.)**		
Clerical and sales	-0.126	-0.223	Clerical and sales	-0.386**	
	(0.073)	(0.125)		(0.141)	
skilled agricultural & craft & trade workers	-0.100	-0.183	skilled agricultural & craft & trade workers	-0.293*	
	(0.092)	(0.126)		(0.137)	
Plant & machine & elementary workers	-0.263**	-0.334*	Plant & machine & elementary workers	-0.299*	
	(0.097)	(0.136)		(0.146)	
Hours of work (<35 hours omit.)			**Hours of work (<35 hours omit.)**		
35-48 hours	-0.026	-0.031	35-48 hours	0.157	
	(0.064)	(0.112)		(0.144)	
49+ hours	-0.116	-0.143	49+ hours	0.047	
	(0.074)	(0.112)		(0.151)	
Tenure (years spent in the same job)					
tenure	0.005	0.008	tenure	-0.002	
	(0.010)	(0.015)		(0.014)	
tenuresq	-0.000	-0.000	tenuresq	0.001	
	(0.000)	(0.001)		(0.000)	
Monthly wage quintiles (First quintile omit.)			**Monthly wage quintiles (First quintile omit.)**		
Second quintile	0.098	0.072	Second quintile	-0.090	
	(0.095)	(0.113)		(0.137)	
Third quintile	0.186*	0.136	Third quintile	-0.172	
	(0.094)	(0.130)		(0.142)	
Fourth quintile	0.244**	0.293*	Fourth quintile	0.113	
	(0.092)	(0.127)		(0.148)	
Fifth quintile	0.274**	0.302**	Fifth quintile	0.131	
	(0.091)	(0.112)		(0.131)	
Firm size (medium (25-99 workers) omit.)			**Firm size (medium (25-99 workers) omit.)**		
Micro (1-4 workers)	0.081	0.061	Micro (1-4 workers)	0.203	
	(0.080)	(0.109)		(0.135)	
Small (5-24 workers)	0.020	0.012	Small (5-24 workers)	0.056	
	(0.063)	(0.095)		(0.098)	
Large (100+ workers/DK)	0.125*	0.154	Large (100+ workers/DK)	0.148	
	(0.051)	(0.099)		(0.102)	
Informal firm (formal firm omit.)			**Informal firm (formal firm omit.)**		
Informal firm	-0.115	-0.112	Informal firm	-0.160	
	(0.071)	(0.087)		(0.101)	
Days of work/month (<16 days/month omit.)					
16+ days/month	0.012	0.094			

	(0.213)	(0.226)		
De jure coverage (not de jure covered omit.)				
De jure covered	0.121	0.069		
	(0.211)	(0.227)		
Nationality (Jordanian omit.)			**Nationality (Jordanian omit.)**	
Syrian	0.149	0.155	Syrian	0.464***
	(0.134)	(0.142)		(0.109)
Egyptian	0.404**	0.443**	Egyptian	0.239
	(0.142)	(0.151)		(0.213)
Other Arab	0.063	0.065	Other Arab	0.055
	(0.144)	(0.155)		(0.166)
Other	0.228	0.186	Other	0.810**
	(0.294)	(0.297)		(0.253)
Constant	0.109	-0.028	Constant	0.142
	(0.238)	(0.267)		(0.223)
p	0.000	0.000	p	0.000
N	3939	1923	N	1490

Source: Authors' calculations based on JLMPS 2016
Note: *p < 0.05, **p < 0.01, ***p < 0.001

Section 7: Conclusions and Implications

This paper has examined the social insurance components of the emerging new social contract in Jordan. We have shown that it become increasingly difficult for Jordanians entering the labor market to obtain a first job that provides effective coverage. Moreover, there are few opportunities for Jordanian workers to shift later into a job that provides effective coverage. These findings indicate that the strategic goal of the new social contract – shifting away from public provision of employment towards private employment that meets the needs and aspirations of the citizens – is a long way from being achieved.

In order to understand the nature of the challenges, this paper analyzed the determinants of effective coverage by social insurance in private wage work – the main alternative to public employment. The determinants of effective coverage can be useful to guide future Government efforts to ensure private sector jobs provide the basic components of social insurance.[33] Implications for policy fall into two categories: regulatory gaps and compliance gaps.

Regulatory gaps

Although the law is relatively comprehensive in requiring coverage – 65% of private sector wage workers are covered de jure -- there are some categories of wage workers for whom coverage is not required.[34] 22% of private sector wage workers are exempted from coverage because they work

[33] This paper focuses on social insurance aspects of the evolving social contract that are provided through the Social Security Corporation. The social contract's assurance of a guaranteed minimum standard of living is addressed in companion papers. Health insurance issues are included in the paper that addresses other aspects of health services. Assurance that employment provides a living wage is addressed together with minimum wages and poverty. And cash assistance for those unable to work is addressed in the paper on social assistance.

[34] In addition, coverage is not required for employers, own account workers and unpaid family workers. These groups are not the focus on this paper given that we are interested in forms of employment that are alternatives to public sector employment.

in agriculture/domestic sectors. Thirteen percent of private sector wage workers are exempted from coverage based on the fact that they work fewer than 16 days a month.[35]

Jordan is not unique in having regulatory gaps in agriculture, domestic work and very short-term employment. Many countries have developed special social insurance mechanisms for agriculture, often subsidizing the contributions. While this approach could be useful in Jordan for low-income farmers, but is not needed for the many farmers in Jordan who are not poor. If special contribution subsidies were made available for the agriculture sector, further criteria may be useful to ensure subsidies go to vulnerable employees and employers who could face effective affordability constraints. Farm size could potentially be used as a proxy for affordability, as it is the practice for example in Tunisia and Brazil. If Jordanian farm owners with holdings over 1,000 dunums were required to pay the full unsubsidized employer contribution, more than a third of employer contributions would not require subsidy.[36]

Because domestic workers are often migrant workers, coverage can be implemented through the recruitment agencies. Many countries require workers who are not citizens to be covered by social security – through local programmes or programmes in the worker's home country.[37] Coverage under host country systems is generally simpler and easier to verify. Some governments require use of host country systems even for seasonal workers as part of their overall efforts to control the number of migrant workers and their impact on the host economy.[38]

The fact that non-Jordanian workers dominate the two exempted sectors is critical. Although the Government's main goal is to ensure a job market that serves Jordanian workers, jobs that are dominated by non-Jordanians are deserving of attention precisely because few Jordanians work in those jobs. It is not impossible to have Jordanians working in agriculture, but it would require that the jobs in agriculture meet the minimum standards of decent work.

[35] Among Jordanians in private wage work, 84% are covered de jure, 3% are exempted because they work in agriculture or domestic sectors, and 13% are exempted because they work fewer than 16 days per month. Jordanian women are roughly similar to Jordanian men in this regard. Among non-Jordanians in private wage work, 42% are covered de jure, 45% are exempted because they work in agriculture or domestic sectors, and 13% are exempted because they work fewer than 16 days per month.

[36] If, for example, the cut-off was at 1,000 dunums, more than a third of farmland – and an even larger share of workers – could be covered under the currently designed programme and the remaining two thirds needing reduced contributions Thirty percent of farm land area is in farms of 1000 dunums or more. Perhaps surprisingly, larger farms are more likely to use casual labor than are smaller farms. 53% of farmland in large holdings (1000 dunums or more) compared to 34% in small holdings (10 dunums or less.) See Agricultural census of 2017 for more details.

[37] German legislation, for example, requires that migrant workers participate in the German social security programme unless they can prove they are covered in their home country. Belgium also requires coverage, with the option to use home country systems for workers who are in Belgium 5 years or less.

[38] The Korean programme that provides social security to seasonal migrant workers with contributions paid by both employers and employees, won the UN Public Service Award for its transparency and successful anti-corruption efforts.

Regarding workers who are not de jure covered because they work fewer than 16 days per month, policy changes are already underway. Draft instructions developed by the SSC requiring coverage of part-time workers in social security on the basis of pro-rata coverage, and are pending internal approval.

Compliance gaps

The analysis in this paper shows that gaps in compliance are as important as regulatory gaps. The analysis in this paper finds several factors that explain the compliance gaps. Among private sector wage workers whose jobs require coverage, *effective* coverage depends on: (i) firm size, (ii) regularity of work, (iii) existence of a written contract. Interestingly, when we look only at those whose jobs require coverage and control for other factors, there are no significant differences by gender or nationality. That is, gender and nationality seem to be relevant for selection into certain types of jobs, rather than determining effective coverage directly.

Existence of a written contract is an important determinant of effective coverage. Although the law recognizes oral agreements as legally binding, as a practical matter it is difficult to hold an employer accountable without a written document. While there is no easy policy solution to this challenge, written contracts should be encouraged.[39]

The evidence is very clear that effective coverage rates are low in small firms.[40] Although the law does not exempt small firms, enforcement of small firms is insufficient for two reasons. First, a perception that small firms cannot afford to provide coverage for their employees may make enforcement officers lenient with small firms. To the extent this phenomenon exists, an explicit discussion is warranted. By default, lack of enforcement based on perception results in benefiting the firms' owners at the expense of the employees. Second, traditional mechanisms of enforcement (i.e., focused on inspections) are inadequate given the limited resources available to SSC. The Social Security Corporation has recently identified other government agencies whose databases can be compared to SSCs own database in order to identify non-compliant firms. For example, a large number of firms – including very small firms – obtain annual profession- or service-specific licenses from the municipality. It is a simple matter to identify any that are not registered with SSC and to contact them electronically. This approach is useful because it relies on emails or SMSs and therefore can be easily automated. To date, the approach has been used to remind firms of their obligations. Ultimately, links with other government agencies can be used for enforcement as well.

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39 Among Jordanian private sector wage workers 58% lack a written contract. (This includes many who are de jure covered. 52% of Jordanian private sector wage workers who are de jure covered lack a written contract. (84% of those not de jure). Among non-Jordanian private sector wage workers 82% lack a written contract. (This includes many who are de jure covered. 74% of those who are de jure covered lack a written contract. 86% of those not de jure covered.)

40 More than half of Jordanians (54%) work in firms less than 10 workers. (27% in firms less than 5). Many of these are de jure covered. (Among de jure covered 53% in firms less than 10). Among non-Jordanians 89% work in firms of fewer than 10 workers. (71% in firms less than 5). (Among de jure, 80% firms less than 10)

A final point to mention related to small firms. Most of what we know about effective coverage of social insurance comes from surveys of workers (conducted as household surveys based on residential listings). In order to better understand reasons for firm non-compliance, it is crucial to also obtain data from the firms themselves. Such data not only allows forming a characterization of the types of firms that are non-compliant, but it can also identify if there are gaps in knowledge about the law, if there are administrative procedures that are overly cumbersome, and the extent to which there is an issue of unaffordability of contributions.

The third key determinant of effective coverage identified in the analysis is regularity of employment. Recall that employment is considered irregular if it is intermittent with various employers. It is important to distinguish between irregular employment, the number of days worked per month and employment paid on a daily basis. Officially the law requires coverage for workers who work 16 days or more per month – whether they are paid on a monthly basis, a daily basis or otherwise. True irregular employment – in which a worker does not remain with any employer for more than a few days – is among the most challenging forms of employment to effectively cover. Even with irregular employment, however, some countries have found useful mechanisms.

Jordan's main social security programme is funded primarily from contributions collected from employees' wages/salaries and from employers – in both cases considered part of the compensation employers give to employees. This approach works less well, however, when there are a large number of very short-term employment arrangements (making tracking contributions cumbersome) or when the employment relationship itself is ambiguous (e.g., in the case of casual workers). In principle – and as evidenced in the empirical literature -- social security contributions could be collected from anywhere along the value chain: the full cost of the final product is paid by the consumer, no matter where along the value chain compensation is paid.[41] Several countries address challenges in collecting contributions by shifting where in the value chain the contributions are collected. In the Indian construction industry, for example, collection of contributions is cumbersome, due to employment arrangements that involve several levels of subcontractors as well as a large amount of day labor. To address this challenge, contributions are collected in the form of levies paid by principal contractors based on the total value of the construction contract, successfully reaching over 70% of workers.[42] Another successful approach has been to collect

[41] See Atkinson and Stiglitz, 1980; Kotlikoff and Summers, 1987; Fullerton and Metcalf, 2002. A large literature has empirically examined the impact of collecting social security from the employer versus the employee. Although there are variations (presumably related to awareness), the literature generally finds little impact on the total compensation received by the worker. That is, when contributions are taken from the employer, cash compensation (wages/salaries) are correspondingly lower and vice versa.

[42] By collecting contributions from larger and more formal enterprises (further along the value chain) India's Worker Welfare Funds that collect social security contributions succeed in high compliance and simple enforcement. Coverage of construction workers reaches over 70% in many states and similar programmes have been developed for agriculture and transport sectors in some Indian states

contributions from recruitment and placement agencies, as done for Filipino migrant workers in several countries. In a third example, cell-phone based ride hailing applications in Indonesia and Uruguay automatically take a small fee from consumers that is then transferred to drivers' social security. Morocco overcame practical challenges by automatically deducting social security contributions from workers in fisheries at the point of sale.[43] Similar approaches may be useful in Jordan – especially given the large number of dependent self-employed workers as well as to address social protection of those who work for different employers each day or each week. In the agriculture sector, for example, many Syrians work as day laborers with recruiters acting as the intermediary between the workers and the farm owners. For day laborers, contributions could be collected through the recruiters. For agriculture workers in general, contributions might be usefully collected through agricultural marketing companies, based on payroll, farm size or volume of sales.

[43] See ILO (2019) and for example also FAO (2019)

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Appendix 1: The relevance of gender and nationality in the labor market

While the majority of wage workers are Jordanian men, non-Jordanians and women are important segments of the labor force. Jordanians comprise 69% of all wage workers, with non-Jordanians accounting for the remaining 31%. Men comprise 85% of all wage workers, with women accounting for the remaining 15%.

Jordanian women have very low rates of labor force participation and very high rates of unemployment. Among Jordanian women who are employed, 50% work in the public sector. The majority of those in the private sector work in education and health sectors.

Nearly all (95% of) public sector workers are Jordanian. In the private sector, Jordanians and non-Jordanians are approximately evenly represented: Jordanians comprise 53%, with the remaining 47% non-Jordanians. The two sectors – agriculture and domestic work – for which social insurance coverage is not required are predominantly comprised of non-Jordanians.

In this paper, we do not consider the extent to which each of these demographic groups influence the labor market as a whole nor the underlying reasons for the differences in labor market outcomes. Nevertheless – as will become clear in the following sections – gender and nationality are important factors in the descriptive analysis of effective coverage by social insurance.

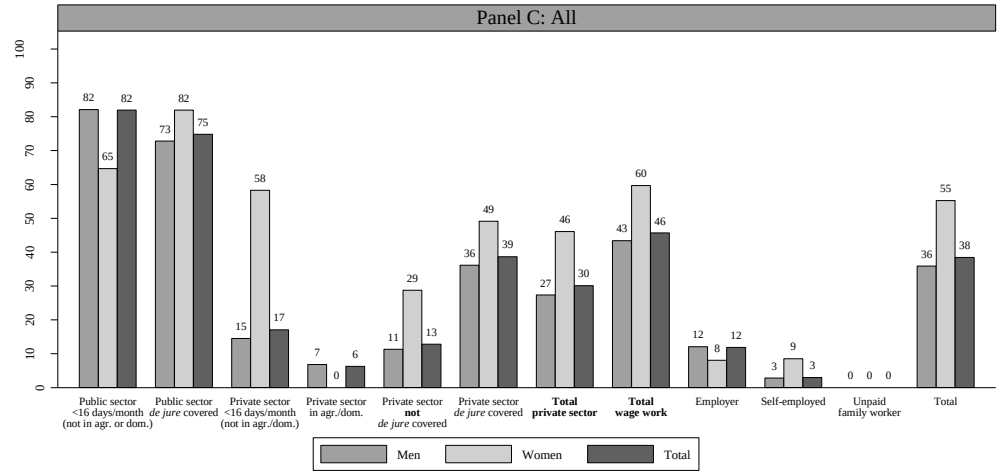
Appendix 2: Voluntary Coverage

Coverage can be obtained for some jobs/workers that are exempted. In particular, an employer can choose to provide coverage for employees even if they are in domestic or agriculture sectors and even if they work less than 16 days a month. Additionally, a non-wage worker can obtain their own coverage conditional on being Jordanian.[44]

The figure below shows voluntary coverage of employees by their employers. The public sector covers 82% of employees whose coverage is not required. Private sector employers cover 13% of employees whose coverage is not required.

The other figure also shows voluntary coverage among Jordanian non-wage workers who obtain their own coverage. It shows that 17% of Jordanian employers and 3% of Jordanian self-employed workers obtain their own coverage. Comparable coverage rages among unpaid family workers are negligible.

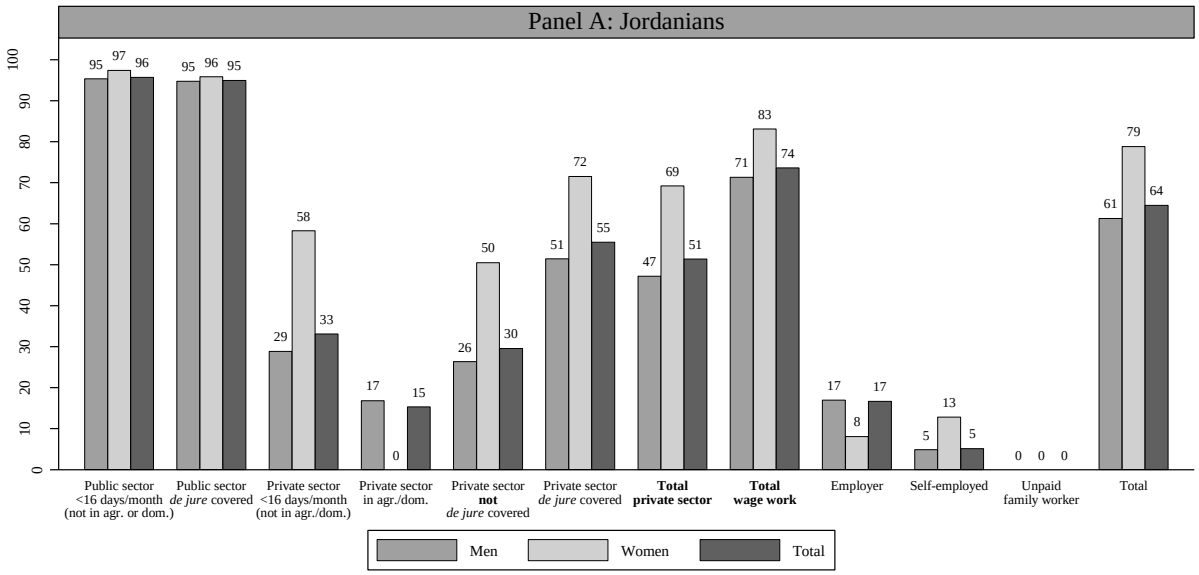
Figure 26: Effective coverage rates relevant to de facto coverage, by gender



Source: Constructed by the authors' using JLMPS 2016

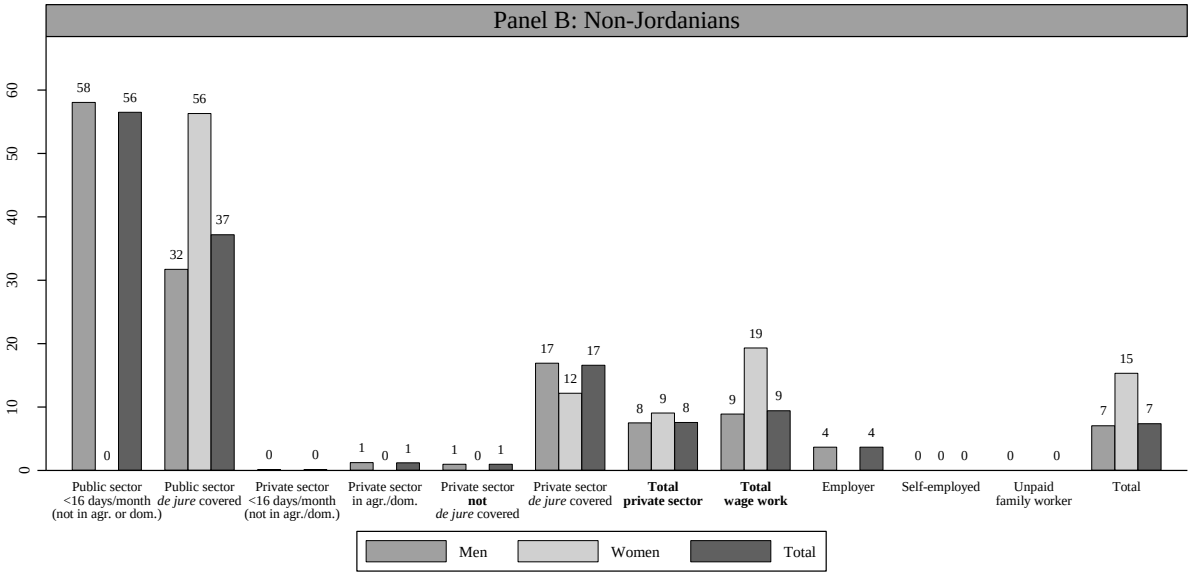
[44] Figure 28 shows effective coverage rates for non-Jordanians.

Figure 27: Effective coverage rates relevant to de facto coverage, by gender (Jordanians only)



Source: Constructed by the authors' using JLMPS 2016

Figure 28: Effective coverage rates by de jure coverage categories (non-Jordanians only)



Source: Constructed by the authors' using JLMPS 2016

Appendix Table 1: Logit models (odds ratio) for the probability of social insurance coverage by sex, Jordanians and non-Jordanians, JLMPS 2016, ages 15-59

	Men in private sector wage work		The *de jure* men in private sector wage work	Women in private sector wage work		The *de jure* women in private sector wage work
	(1)	(2)	(3)	(4)	(5)	(6)
	(spec.1)	(spec.2)	(spec.1)	(spec.2)	(spec.1)	(spec.1)
Age group (15-24 omit.)						
25-34	0.746	0.758	0.822	0.807	0.987	1.082
	(0.277)	(0.278)	(0.295)	(0.288)	(0.499)	(0.554)
35-44	0.610	0.611	0.563	0.612	2.723	2.743
	(0.268)	(0.276)	(0.239)	(0.276)	(1.994)	(2.111)
45-60	0.432	0.450	0.448	0.476	4.372	3.635
	(0.207)	(0.233)	(0.229)	(0.263)	(4.643)	(4.020)
Gender (Men omit.)						
Female						
Education level (none omit.)						
Below Secondary	1.003	1.073	0.916	1.089	0.507	0.389
	(0.312)	(0.341)	(0.301)	(0.395)	(0.660)	(0.581)
Secondary	1.289	1.510	1.096	1.529	0.320	0.273
	(0.429)	(0.499)	(0.427)	(0.584)	(0.416)	(0.395)
University and Above	1.831	2.285*	1.544	2.495	0.395	0.329
	(0.789)	(0.949)	(0.780)	(1.240)	(0.547)	(0.498)
Region (Middle omit.)						
North	0.922	0.877	0.693	0.661	0.589	0.559
	(0.226)	(0.239)	(0.190)	(0.197)	(0.359)	(0.346)
South	2.026	2.193	1.421	1.555	0.925	1.077
	(1.237)	(1.329)	(0.872)	(0.943)	(0.758)	(0.924)
Urban/Rural (urban omit.)						
Rural	3.838*	3.879*	4.646	4.281*	3.463	3.281
	(2.458)	(2.216)	(3.725)	(2.945)	(2.316)	(2.395)
Inside/outside establishment (Inside establishment omit.)						
Outside estab. private wage	0.493	0.486	0.401	0.477	2.187	16.914*
	(0.288)	(0.264)	(0.239)	(0.275)	(1.975)	(18.817)
Irregular work (regular omit.)						
Yes	0.269**	0.074	0.198**	0.462	0.390	0.399
	(0.120)	(0.113)	(0.100)	(0.374)	(0.346)	(0.414)
Contract (contracted omit.)						
No	0.576	0.787	0.549*	0.753	0.451	0.436
	(0.170)	(0.397)	(0.160)	(0.403)	(0.212)	(0.212)
Economic Activity (Broad manuf omit.)						
Broad Manufacturing	36.096***	36.987***			0.333	
	(29.703)	(31.779)			(0.189)	
Construction	18.280***	22.887***	0.552	0.686		
	(13.748)	(18.134)	(0.296)	(0.342)		
Wholesale & retail trade & food & accomodation	16.857**	17.482***	0.424*	0.449*	1.324	3.475
	(14.635)	(15.093)	(0.146)	(0.165)	(0.707)	(2.745)
Transp. storage & communication	3.554	3.719	0.124***	0.140**		
	(3.089)	(3.203)	(0.074)	(0.091)		
Other Services	6.692**	7.927**	0.201***	0.252**		3.028
	(4.633)	(5.625)	(0.084)	(0.107)		(1.889)
Occupation (professionals & assoc. prof. omit.)						
Clerical and sales	0.693	0.686	0.761	0.751	0.106***	0.152**
	(0.345)	(0.332)	(0.383)	(0.360)	(0.066)	(0.101)

skilled agricultural & craft & trade workers	0.576	0.653	0.524	0.724	1.783	2.389
	(0.296)	(0.348)	(0.300)	(0.403)	(2.137)	(3.086)
Plant & machine & elemntary workers	0.574	0.623	0.578	0.680	0.198	0.283
	(0.297)	(0.315)	(0.329)	(0.366)	(0.202)	(0.332)
Hours of work (<35 hours omit.)						
35-48 hours	1.980		1.833		0.771	0.733
	(0.703)		(0.782)		(0.522)	(0.563)
49+ hours	1.071		0.816		0.967	0.693
	(0.419)		(0.361)		(0.776)	(0.677)
Tenure (years spent in the same job)						
Tenure squared	1.123*	1.116*	1.124*	1.128*	1.032	1.069
	(0.057)	(0.057)	(0.060)	(0.063)	(0.106)	(0.117)
tenuresq	0.996*	0.997*	0.996*	0.996*	0.995	0.994
	(0.002)	(0.002)	(0.002)	(0.002)	(0.003)	(0.004)
Monthly wage quintiles (First quintile omit.)						
Second quintile	0.949	0.926	0.994	0.845	1.693	1.813
	(0.383)	(0.370)	(0.430)	(0.391)	(0.968)	(1.155)
Third quintile	1.092	1.014	1.135	0.910	0.256	0.279
	(0.499)	(0.482)	(0.552)	(0.463)	(0.201)	(0.221)
Fourth quintile	1.586	1.521	1.482	1.215	4.511	3.905
	(0.813)	(0.809)	(0.838)	(0.733)	(6.001)	(5.357)
Fifth quintile	1.777	1.724	1.808	1.485	0.271	0.249
	(0.600)	(0.630)	(0.682)	(0.621)	(0.196)	(0.182)
Firm size (medium (25-99 workers) omit.)						
Micro (1-4 workers)	0.084***	0.068***	0.090***	0.082**	0.190*	0.283
	(0.032)	(0.050)	(0.038)	(0.066)	(0.124)	(0.196)
Small (5-24 workers)	0.261***	0.331*	0.260***	0.309*	0.161**	0.218**
	(0.085)	(0.168)	(0.087)	(0.157)	(0.092)	(0.123)
Large (100+ workers/DK)	1.556	4.938***	1.810	6.059***	1.640	1.801
	(0.544)	(2.388)	(0.656)	(3.048)	(1.202)	(1.428)
Informal firm (formal firm omit.)						
Informal firm	0.307***	0.441	0.372***	0.648	0.241*	0.282
	(0.079)	(0.193)	(0.093)	(0.298)	(0.158)	(0.199)
Days of work/month (<16 days/month omit.)						
16+ days/month	2.155	1.899			0.872	
	(0.932)	(0.774)			(0.524)	
Nationality (Jordanian omit.)						
Egyptian	1.256	1.193	2.417	2.045		
	(1.106)	(1.022)	(2.402)	(1.832)		
Other Arab	0.482	0.462	0.582	0.533	0.050*	0.068*
	(0.195)	(0.188)	(0.243)	(0.221)	(0.062)	(0.085)
Irregular and firm size int.						
Yes # Micro (1-4 workers)		0.139		0.036*		
		(0.248)		(0.049)		
Yes # Small (5-24 workers)		5.395		0.689		
		(8.658)		(0.622)		
Yes # Large (100+ workers/DK)		5.003				
		(8.257)				
No contrat and firm size int.						
No # Micro (1-4 workers)		1.274		0.936		
		(1.089)		(0.810)		
No # Small (5-24 workers)		0.897		1.145		

		(0.576)		(0.751)		
No # Large (100+ workers/DK)		0.153*		0.141*		
		(0.116)		(0.116)		
Informal firm and firm size int.						
Informal firm # Micro (1-4 workers)		0.697		0.640		
		(0.547)		(0.455)		
Informal firm # Small (5-24 workers)		0.527		0.366		
		(0.322)		(0.247)		
Informal firm # Large (100+ workers/DK)		0.562		0.342		
		(0.364)		(0.253)		
p	0.000	0.000	0.000	0.000	0.000	0.000
N	1458	1471	1126	1129	301	275
Pseudo R-squared	.5205357	.5258356	.4425114	.4424066	.3588104	.3080355

Source: Authors' calculations based on JLMPS 2016
Note: *p < 0.05, **p < 0.01, ***p < 0.001