Fringe benefits and income inequality[☆]

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Abstract

In this paper, we analyze the distribution of fringe benefits among workers and underline its implications for income inequality. To this end, we develop a positional approach to inequality based on the concept of rent as a potential link between positions and their rewards. We hypothesize that workers extract rent in the form of benefits in industries with worker leverage (in the form of unioniziation, internal labor market, and public employment) or share rent with firms in highly profitable industries that endure for efficiency wage reasons. On the basis of a unique dataset from Israel, we test these hypotheses by estimating the probabilities of obtaining benefits according to industries' structural features while controlling for cross-industrial differences in workers' demographic and human capital characteristics. The analyses reveal that benefits are determined by structural factors, representing a separate dimension of the rewards attached to positions, different from earnings. We further stress the importance of incorporating fringe benefits into inequality research, given that benefits together with earnings stratify workers and evidently signify structured positions in the economy.

1. Introduction

Wages and salaries are only one potential source of income inequality among workers. Some workers receive a range of financial supplements known as "voluntary fringe benefits" – the most common of which are healthcare insurance and pension. Typically, voluntary fringe benefits (hereafter: fringe benefits) are important to workers in Anglo-American and Continental European countries, but less so in Scandinavia (Esping-Andersen, 1990; Hacker, 2002; Shalev, 1996).[1] In 2000, for example, fringe benefits added about 17 percent to American and Dutch workers' income from wages and salaries (OECD Economic Outlook, 2000). Although fringe benefits are an essential component of workers' total compensation and can be fundamental sources of

[1] Scandinavian countries are associated with inclusive and generous public social-security programs, which are provided by the state to the population as a whole.

inequality, they have rarely been analyzed in stratification research. In this paper, we hope to contribute to the study of fringe benefits and stratification research by presenting and estimating a structural, rent-based model for benefit determination, as well as estimating the effects of fringe benefits on the level of income inequality and speculate on their effects on the diversification in workers' short-term economic interests. A unique, matched, Israeli employer–employee tax dataset enables us to empirically address these issues.

The distribution of income from fringe benefits provides strong evidence in favor of the long-standing argument that "structure" matters for income inequality. In fact, there seems to be a broad consensus that benefits are linked to a job's characteristics (Kalleberg & Van Buren, 1996; O'Rand, 1986; O'Rand and MacLean, 1986). Overall, fringe benefits are widespread in jobs at large business firms, unionized workplaces or in the public sector. Yet we still lack an agreed-upon explanation for what determines the likelihood of obtaining benefits, and more importantly, why some characteristics matter. Building on the insight that rewards are often tied to positions rather than to particular employees (Sørensen & Kalleberg, 1981) and the related idea of economic rent (Sørensen, 1996, 2000; Wright, 1997), this paper goes beyond existing literature by elaborating the mechanisms through which benefits are linked to positions. Specifically, we argue that benefits are the result of practices of rent-extraction and rent-sharing by workers. Workers can extract benefits from firms due to their leverage in highly unionized industries, industries with established internal labor markets, as well as industries in the public sector. Alternatively, workers can obtain benefits by rent-sharing with employers in highly profitable firms that tend to follow efficiency wage practices.

Analyzing benefits determination is one thing. Understanding their impact on inequality levels is another. Most research on income inequality analyzes the distribution of wages and salaries and thus might either underestimate or overestimate the level of income inequality among workers (Pierce, 2001; Piketty & Saez, 2003) and between jobs (Jencks, Perman, & Rainwater, 1988). If benefits are determined exactly like earnings, inequality levels resulting from all income sources (namely earnings and benefits) should be higher than earnings inequality. If, however, fringe benefits compensate workers employed in low-wage jobs, as suggested by the classical economic view of compensating differentials (with roots in Smith, [1776] 1937), inequality measures that exclude these "hidden" rewards overestimate the level of income inequality among workers. Our dataset includes an estimation of the monetary value of fringe benefits, which usually is not readily available, and enables us to test their effect on the inequality level.

We begin by reviewing the relevant theoretical literature, upon which we develop the subsequent theoretical and empirical analyses. In Section 3, we explain why Israel is a good case study for understanding the distribution of fringe benefits. In Section 4, we describe the data, measures, and the method of analysis. In Section 5, we test the hypotheses by estimating hierarchical logistic models estimating which workers, classified according to individual and industrial characteristics, are more likely to obtain additional income from fringe benefits. In the subsequent section, we analyze the effects of fringe benefits on overall level of income inequality among workers and between groups of workers depending on the level of benefits they receive (if at all). In Section 7, we highlight the social and political implications of the findings, suggesting that the process that creates inequality in benefits may intensify conflicts of interest between income groups depending on their sources of income.

2. Rent-sharing, rent-extraction, and fringe benefits

Our theoretical framework suggests how the structural characteristics of jobs are implicated in the distribution of benefits. We specify the mechanisms through which jobs are linked to benefits, based on the idea of jobs as productive assets that bring economic rent. Productive assets can be broadly conceptualized as structurally advantageous positions that generate rent independently of the efforts of the persons occupying these positions (Sørensen, 1996, 2000; Wright, 1997). Based on the concept of rent extraction as a potential link between positions in the labor market and their rewards, Weeden (2002) elaborates a positional approach to inequality that explains why earnings are higher in some occupations than in others. We take a similar approach to positional inequality, but focus on a related question – why are some jobs compensated by benefits, while others are not?

We therefore distinguish between two kinds of advantageous positions that are likely to generate rent in the form of benefits. First, firms in highly profitable industries, due to a monopoly position or to export opportunities, may share some of their rent with the workers by compensating them with high wages and considerable benefits. Rent-sharing between firms and workers endures due to efficiency wage practices: by providing workers fringe benefits and raising workers total compensation above market wages, firms are likely to get in return workers' compliance and desire to
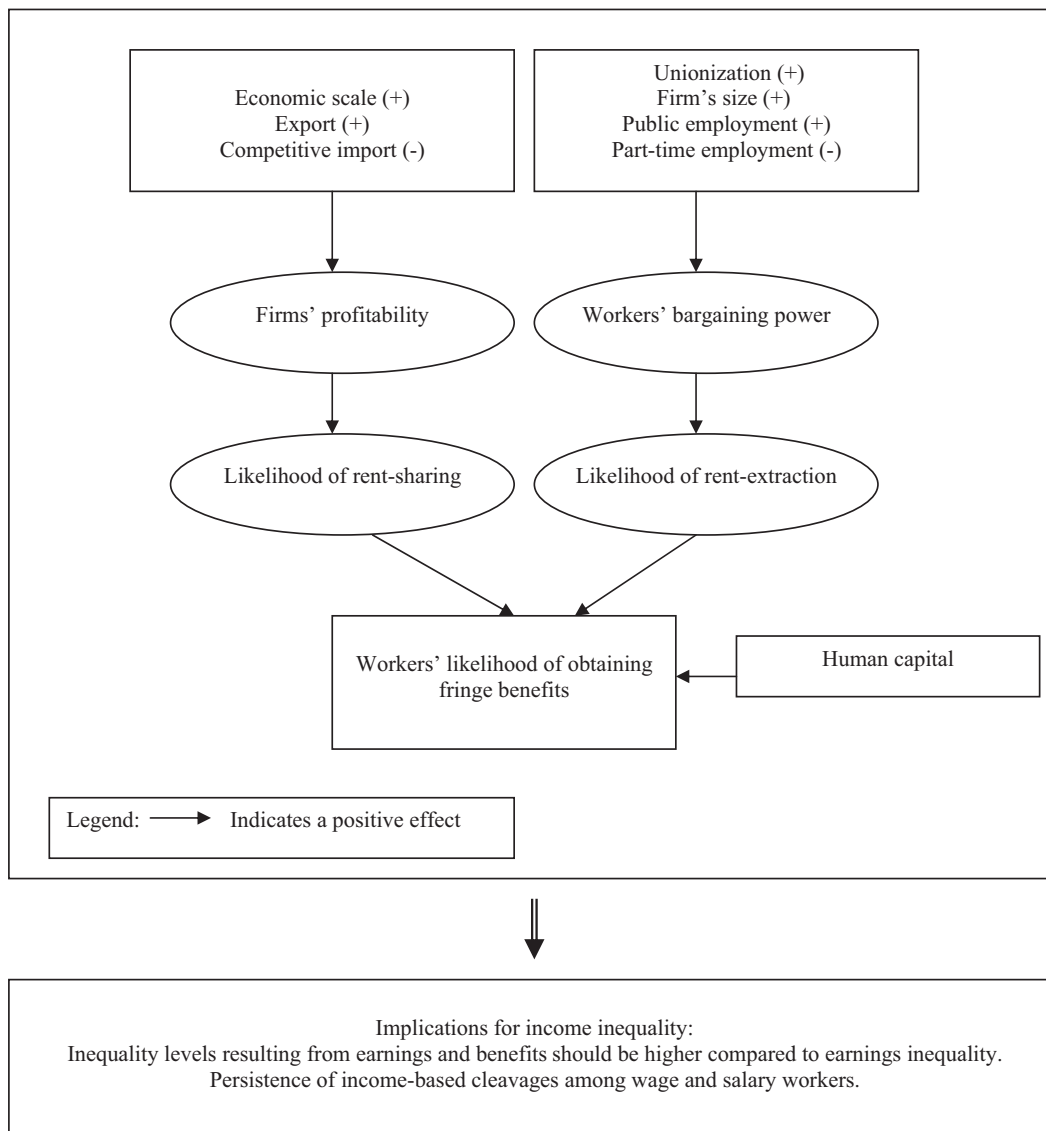
Fig. 1. Structural positions, practices of rent, fringe benefits, and income inequality.

keep their jobs, hence workers' efforts and productivity will increase. Second, and alternatively to rent-sharing, workers rent-extraction is possible due to their bargaining power in highly unionized industries, industries with well established internal labor markets, or public sector industries. Consequently, industries' structural advantageous positions that indicate rent-sharing or rent-extraction practices should generate rent in the form of benefits, independent of the efforts of persons occupying these positions.

Fig. 1 presents a diagram of the causal pathway between structural positions and benefits. In the following pages, we elaborate on how these structural characteristics of jobs, typified by their product market environment and workers' bargaining power, explain the likelihood of rent-sharing and rent-extraction practices and, therefore, of obtaining benefits. In

Sections 6 and 7, we demonstrate the implications of this theoretical model for the level of income inequality and consider its implications for the persistence of income-based cleavage among wage and salary workers.

2.1. Product market environment, rent-sharing, and benefits

Firms' advantageous and disadvantageous positions in the product market may explain benefits inequality as a result of rent-sharing between firms and workers. Firms in an advantageous position in the product market, due to a monopoly power or to export opportunities, are highly profitable and may share some of their profits with the workers by compensating them with high wages and considerable benefits. By contrast, firms in import-competing industries typically hold a disadvantageous

position that reduces their profitability and therefore their capability to compensate workers.

Firms in highly profitable industries are likely to share part of their rent extraction with workers as a device to elicit effort and productivity. The underlying assumption is that workers being paid more than their market wage will work with greater effort because they have more to lose by being dismissed from their jobs, hence workers' (high) productivity depends at least in part on their (high) wages (Ackerlof & Yellen, 1986; Bowles & Gintis, 1990). Supporting the idea that firms find it profitable to pay above-market, noncompetitive wages, the inter-industry wage gaps were found to reflect in large part rent-sharing between firms and workers (Blanchflower, Oswald, & Sanfey, 1996; Krueger & Summers, 1988) and not necessarily unobserved differences in ability, as argued before (Cain, 1976). We argue that such an efficiency wage explanation – i.e., firms find it profitable to compensate workers above the going wage–holds true with respect to fringe benefits. In fact, benefits, even more than high wages, should reduce firms' turnover costs and raise profits. This is so because benefits as a deferred income are likely to increase workers attachment to the firm. In this paper, we do not directly test if firms indeed profit in the long-term from providing benefits. Rather, we maintain that positive relations between firms' advantageous positions and benefits are most likely due to practices of efficiency wages.

The most common advantage in the product market is to be part of the large "core" business firms that face favorable conditions in their industrial sectors and product markets and therefore enjoy relatively high profits (Doeringer & Piore, 1971; Gordon, Edwards, & Reich, 1982). These firms in industries with high economic scale and high concentration hold monopolistic positions in their product markets that allow them to earn excess rents, some of which are shared with the workers through higher wages (Blanchflower et al., 1996; Kalleberg, Wallace, & Althauser, 1981; Moller & Rubin, 2008; Reid & Rubin, 2003), and most likely also through extensive benefits.

Industries may also hold an advantageous position in the global product market, explaining the variation between jobs in wage rates and benefits. Firms in an expanding industry – the export sector – can benefit from an increased demand for their products, and workers in this sector may also benefit from higher wages and benefits. Indeed, in the U.S., exporting firms tend to be larger and more productive, while sharing some of their success with workers – the export wage premium was found to be between 7 and 11 percent (Bernard & Bradford, 1995). While workers in export industries may

gain in terms of wages and benefits, workers in import-competing industries have less capacity to effectively bargain for higher wages and benefits. In fact, increasing imports from less-developed countries have been found to induce sizable drops in the prices of goods produced by low-skilled American workers, which reduces demand for their labor and lowers their wages and employment (Revenga, 1992), even in relatively union-intensive sectors (Borjas & Ramey, 1994).

2.2. Workers' bargaining power, rent-extraction, and benefits

Unlike rent sharing, which is initiated by employers, rent extraction is driven by workers' bargaining power. There are several factors that make rent-extraction possible. Unions are generally seen as forms of monopolistic power within labor markets that generate monopoly rents for workers. Unions create rents in the form of high wages and fringe benefits in two ways. First, unions increase both the total compensation package and the total provision of employee fringe benefits relative to non-union situations (Buchmueller, Dinardo, & Valletta, 2002; Budd, 2004; Freeman, 1981; Freeman & Medoff, 1984). This is in conformance with a union collective voice (Freeman & Medoff, 1984) that rearranges the total compensation package towards more benefits to reflect the preferences of the average worker, who presumably desires healthcare insurance, pensions, and vacations as a function of being older and having greater seniority. Second, unions can create rents in the form of fringe benefits to nonunion workers in their industry (Farber, 2005). When employers are worried about the threat of labor organizing, they attempt to preempt unionization by raising compensation for their nonunion workers to a level that is competitive with unionized workers in the industry (Leicht, 1989).

The dual or segmented economy theories hypothesize that large "core" firms may enjoy a more stable position within the product market, allowing them to create an internal labor market (ILM) – long-term employment and training structures – beneficial to their workers (Kalleberg et al., 1981; Baron & Bielby, 1984; Doeringer & Piore, 1971). Workers employed in firms with an ILM are more likely to extract fringe benefits and higher wages (albeit, not at the start of their careers) because they have on-the-job training and longer tenure with their employers. A firm's size is generally used as a proxy for its ability to sustain an internal labor market (Pfeffer & Cohen, 1984). Firms of large size were found indeed to pay high wages and to provide better fringe benefits (Brown, Hamilton, & Medoff, 1990; Kalleberg &

Van Buren, 1996; Lord & Falk, 1982; O'Rand, 1986). Although size effects have declined by about one third during the 1990s (Hollister, 2004), most likely due to the externalization of employment relations (DiPrete, Goux, & Maurin, 2002) and the growing dualism between organizational insiders and outsiders (Kalleberg, 2003), they are still relatively large.

The idea of segmented labor markets – namely, that some industries provide good jobs, while other industries provide bad jobs – may be less true in recent years. Growing evidence suggests that these employment strategies are being used together, not only within industries in both the private and public sectors, but even within firms (Kalleberg, 2000; Smith, 1997). Firms reduce costs and adjust the size of their workforce to fluctuations in demand by using "nonstandard" employment relations, such as subcontracting, employment through temp work agencies, and short-term work (Kalleberg, Reskin, & Hudson, 2000). Jobs in nonstandard employment relations are, by definition, less secure than standard jobs, which put those workers in a weaker bargaining position. Indeed, the odds that workers employed in nonstandard employment relations will have access to healthcare insurance (in the U.S.) and pension benefits (in both the U.S. and the U.K.) were found to be smaller than those of full-time workers (Kalleberg et al., 2000; McGovern, Smeaton, & Hill, 2004).

Finally, benefits accruing to jobs in state and local governments are demonstrably more favorable than in private firms (Kalleberg & Van Buren, 1996). In addition to the common presence of unions and the practice of internal labor markets, the higher probability of benefits in the public sector can also be explained by institutional pressures and norms (Guthrie & Roth, 1999) or by job credentials that create monopoly rents to those holding the credentials (Sørensen, 2000; Weeden, 2002; Wright, 1997).

In sum, we argue that workers obtain benefits as a result of rent-sharing with employers in highly profitable firms following efficiency wage practices, or due to rent-extraction of workers with stronger bargaining position in unionized industries, large business firms, and public sector industries. By contrast, recent evidence suggests that competitive import and nonstandard employment relations have eliminated the advantageous position of workers in terms of rent-sharing and rent-extraction. Hence, workers employed in industries characterized by these disadvantageous positions are less likely to obtain benefits, in particular in low-skilled industries.

The main thrust of this paper is to analyze the effect of indicators for firms' profitability (that enables rent-sharing) and workers' bargaining power (that enables rent-extraction) on workers' likelihood of obtaining fringe benefits in Israel. Although the causal mechanisms we posit do not intrinsically depend on the Israeli context and the relationships revealed presumably can be generalized to other industrial countries, in Israel there is a unique tax dataset that enables us to empirically test these relations. Before proceeding with the empirical analysis, in the next section we provide an introduction to the Israeli setting.

3. The Israeli case

Israel is a good case study for fringe benefits for a few reasons. First, it shares fundamental characteristics with other counties in which the state relegates the provision of social benefits to the workplace. Israel's social policy has been historically based upon low state benefits and a tier of occupational and enterprise-based benefits provided by some employers to select groups of workers (Doron & Kramer, 1991; Mundlak, 2007; Shalev, 1992). The provision of voluntary fringe benefits in Israel is primarily dictated by collective agreements and is a legacy rooted in the strong position held by the labor movement in the years following statehood. The dominance of the labor movement during those years did not lead to the establishment of generous public social-security programs, similarly to the system in the Scandinavian countries. Rather, a system of occupation-based benefits better served the labor movement's interests in strengthening its link with workers and in sustaining the framework for the operation of collective agreements (Gal & Bargal, 2002). Not surprisingly, fringe benefits have a significant effect on Israeli workers' income. In the 1990s, fringe benefits – including mainly employers' allocations to pension and to training funds – added about 25 percent to workers' income from wages and salaries (Kristal, 2008).[2]

Second, as in the U.S. and other countries, the level of benefits in Israel decreased in the last decades (it was about 30 percent in the 1980s), most likely due to the changes that took place in the Israeli labor and product markets. Over the last two decades, organized labor has grown significantly weaker (Cohen, Haberfeld, Mundlak, & Saporta, 2003) and collective bargaining has been decentralized (Kristal & Cohen, 2007). Non-standard employment relations have proliferated and Israel's public sector has become a world leader

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[2] Unlike the U.S., and more like the UK, since 1995 Israel has had a universal system of public healthcare, which is funded by designated taxation.

in employing contract workers (Cohen & Haberfeld, 1993; Cohen & Stier, 2006; Mundlak, 2007; Nadiv, 2004). In parallel to the dramatic changes in the labor market, the Israeli product market has gone through important changes. In the 1990s, the dual structure of the product market contained big business, which was represented by several business groups, and numerous small firms (Kosenko, 2007; Maman, 1999). As a result of the Economic Stabilization Plan of June 1985 and the liberal reforms in the capital markets that took place afterwards, the volume of international trade grew and labor-intensive industries have moved to peripheral countries (Gabai & Rob, 2002).

Finally, processes of inequality in Israel are most similar to those of the Anglo-American countries, and to lesser extent to some of the corporatist countries. The dramatic changes in the Israeli economy have not only increased wage inequality by about 24 percent from 1980 to 1998 (Kristal & Cohen, 2007), but most likely have also affected the distribution of benefits. Whereas more then 81 percent of salaried workers were covered by pension in the early 1980s, by 2002 their share had dropped to 74 percent (Israel, 1982, 2005). Higher percentages of Jews and males were found to be covered by pension, and pension coverage increases with education, income, seniority and age, but decreases after age 64 (Dahan, 2003; Terkel & Spivak, 2001). As has been the trend in other countries, pension quality has continuously eroded, resulting from a shift from traditionally defined benefits plans to defined contributions plans, in which the investment risks are borne by the employee rather than the pension fund (Spivak, 2002). In short, it appears that much that characterized the Anglo-Saxon countries with respect to changes in product and labor markets, rising earning inequality and erosion in fringe benefits has occurred in Israel as well. Therefore the Israeli case, where unique data are available, is not atypical, and can be generalized to other developed countries.

4. Data, variables and method of analysis

4.1. Data

Since our theoretical model suggests that benefits derive from structural locations of jobs, we have constructed measures for jobs that feature advantageous and disadvantageous positions at the industry level. We then linked industrial-level data with individual-level data that includes information on workers' demographic and employment characteristics. Taken together, the data allow the impact on benefits of industries' features to be estimated net of the demographic attributes and employment aspects of industries' incumbents. To be sure, individual's characteristics are important in explaining the distribution of benefits; our intention here, however, is to emphasize that structure matters as well, and therefore we expect to find net effects of the featured industries on benefits.

The data at the individual level are based on the 1998 sample of the Israeli State Revenue Division created for tax modelling purposes. This sample is arguably the most reliable information, as it is based on administrative records of the income tax collection system – reports of employers regarding their employees and annual returns of self-employed individuals. The sample covers 1 percent of the employed civilian labor force in 1998 (the latest year for which these data are available). We limit the analyses to workers with income from wages and salaries, aged 25–64, with no missing values on any of the variables used in the analysis, which yields a sample size of 15,890 wage and salary workers.[3] In order to construct measures that indicate the likelihood of rent-sharing and rent-extraction, we collected data from various sources for as many industries as possible – 50 in all – given the available data.

4.2. Variables

The individual tax dataset includes comprehensive information on workers' income sources. In addition to annual earnings, it includes data on employers' allocations to the two main fringe benefits in Israel – pension and a saving scheme named *Keren Hishtalmut* (hereafter: KH). A notable feature of pension and KH, which distinguishes them from wages and salaries, is that some jobs receive none at all. Employers may offer minimal or no benefits to their employees, or may offer benefits only to selected groups of employees. Consequently, our dependent variables – pension and KH – are dummy variables, where one denotes a positive income from the specific source. Definitions and descriptive statistics for all variables appear in Table 1.

In 1998, 77 percent of workers were covered by employer-provided pension. Pension funds in Israel are employment-related and vary according to employment sector. Specifically, there are three main sets of pension plans: (1) budgetary pension funds cover mainly civil servants, local-government employees, and employees

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[3] Although the study refers only to employees, in practice this category includes 716 (4.5% of our sample) self-employed who for tax reasons prefer to draw a salary from their business.

Table 1
Measurement and sources of variables used in the analysis.

	Measurement	Mean	S.D.	Source
Dependent variables – income sources (N = 15,890)				
Pension	Employer allocates income to pension plans	0.77		Tax dataset, 1998
KH	Employer allocates income to *Keren Hishtalmut*	0.50		Tax dataset, 1998
Independent variables at the individual-level (N = 15,890)				
Wage and salary[a]	Annual income from all places of work where the individual was employed (NIS)	81,512	97,938	Tax dataset, 1998
Age	Continuous variable	39.98	10.26	Tax dataset, 1998
Female	Dummy variable, 0 denotes male	0.46		Tax dataset, 1998
Unmarried	Dummy variable, 0 denotes married	0.25		Tax dataset, 1998
New immigrant	Dummy variable, 0 denotes Israeli-born or immigrants who immigrated before 1989	0.17		Tax dataset, 1998
Months	Continuous variable of number of months worked in a year	9.69	3.32	Tax dataset, 1998
Manager	Dummy variable, manager who owns some of the company's stocks	0.03		Tax dataset, 1998
Daily workers	Dummy variable, 0 denotes fulltime or part-time workers	0.02		Tax dataset, 1998
Independent variables at the industrial-level (N = 50)[b]				
Advantageous positions				
Economic scale	Product divided by number of employed persons (million NIS)	261.1	178.3	Input-output accounts, 1995
Export	% exports of goods and services from output	8.4	15.2	Input-output accounts, 1995
Unionized	% salaried workers who are *Histadrut* member or union member	52.2	23.2	IR survey, 2000[c]
Large firms	% firms employed 500+ employees	27.9	19.1	Tax dataset, 1998
Public employment	% employed by non-profit organization, local government, or central government	34.3	40.8	Tax dataset, 1998
Disadvantageous positions				
Competitive import	% competitive import from output	5.8	12.4	Input-output accounts, 1995
Part-time	% salaried workers age 25-64 employed in a part-time job	11.8	9.5	Labor force survey, 1998
Low-skill	% salaried workers age 25-64 with less than 12 years of schooling	23.8	13.9	Labor force survey, 1998

[a] In New Israeli Shekels (NIS). In 1998 1US Dollar = 3.805 NIS.

[b] These are weighted averages.

[c] See Cohen et al. (2003). Although this survey includes a small number of cases in each industry, the distribution along the industries fit well with our previous knowledge.

of government-owned companies. Since in budgetary pension plans the employer pays the pensions to the retired employees from his current budget, information on such pension plans is missing from the tax dataset. Nevertheless, since the vast majority of public sector employees (99 percent) also get the third type of pension (see below) this does not bias the results; (2) occupational pension funds, among which are the *Histadrut*-affiliated pension funds that operate through a few large insurance funds on behalf of various occupational groups. Employers and employees both participate in paying insurance contributions to these funds – usually 12 and 5 percent of wages, respectively; and (3) savings arrangements for retirement (defined contributions plans, such as the 401(k) for private sector workers in the U.S.) are basically private savings to which employers make contributions (to which employees often add). These pension plans, unlike the first two, are not necessarily directed toward paying monthly pension allowances. It is not uncommon for workers enrolled in the first two pension plans to receive employer contributions to the third plan as well.

The other major type of fringe benefits in Israel is employers' and employees' allocations to a saving scheme named *Keren Hishtalmut* (literally, ongoing training fund) – half of the workers were covered by KH in 1998. Employer contributions to KH are usually 7.5 percent of pretax wages and employee contributions are usually 2.5 percent. KH is an important economic benefit for workers since these allocations are exempt from taxes (up to a monthly salary of 15,712 NIS, around 3600$). After six years (or less, when used for purposes prescribed by law such as schooling), workers can retrieve the full amount, including profits, exempt from taxes. Originally, KH were established by occupational unions for their members during the 1960s (i.e., KH for civil engineering technicians was founded in 1964 and for teachers in 1963). The initial objective of KH was to provide incentives for workers to keep up to date in their professions by taking courses and enhancing their

formal education. Over the years, however, KH has diffused across all sorts of organizations and occupations and its main function became a tax-exempt saving scheme for any purpose. Hence, both KH and pension offer workers differed tax-exempt income for the medium run (KH) or the long-run (pension).

The tax data includes indicators on workers' demographic and employment characteristics. A number of demographic variables commonly associated with benefits are included in the analysis. These measures include age, sex, marital status, and immigration status. Additional information on workers' employment includes months worked in a year and daily workers. The most important variable at the individual level, for our purpose, is annual earnings. Studies that seek to explain income differential for equally skilled workers have typically controlled for individuals' educational enrollment. The assumption is that educational enrollment is the prime measure for human capital. Yet we do not have data on workers' education at the individual level. Nevertheless, we believe that by controlling for workers' earnings, which is in large part a function of both measurable and unmeasurable human capital, we can even better equalize skill levels across industries, as earnings are considered to be the best overall proxy for observed and unobserved skills.

Variables at the industry level include *economic scale*, as an indicator of industry monopoly position, and industrial propensity to *export*. Although our argument for rent-sharing is associated with highly profitable industries, direct measures of profits are not available. Furthermore, a direct measure for profits may bias the results due to a reverse causality between benefits and profits. We therefore use economic scale and export as likely sources of industries' profitability. *Unionization* is measured by the percentage of wage and salary workers in an industry who are either *Histadrut* or union members. Using the individual tax data, we constructed measures for the percentage of workers employed in large firms (500+ employees) in 50 industries as well as the percentage of state workers in each industry. We defined *public employment* according to the income tax administrative classification of the type of employer. We included in the public sector employees of central government (employees in public administration), local government (employees in local administration and elementary school teachers), as well as non-profit organizations that engage in provision of public services (mostly workers employed in colleges and universities, high schools, and general hospitals). We also constructed two measures for industries' disadvantageous positions. *Competitive import* is measured by the share of imported

goods and services that are competitive with domestic production out of the industry's total output.[4] *Part-time employment* is measured by the percentage of workers 25–64 years old who are employed part-time in each industry. This measure aims to capture the effect of nonstandard employment relations on the distribution of benefits.

4.3. Method

The effects of industries' characteristics on individual-level income outcomes can be conveniently evaluated via the use of a hierarchical logistic model (HLM).[5] This procedure enables us to estimate industry-level effects, while controlling for cross-industrial differences in the characteristics of the individuals nested within them (Raudenbush & Bryk, 2002). We estimate hierarchical logistic models to predict the probabilities of obtaining pension and KH. The two-level models can be represented by a set of two equations, as follows:

$$\log[p_{ij}/(1 - p_{ij})]$$
$$= \beta_{0j} + \beta_{ij}(\text{individual\_level\_variables}) + \varepsilon_{ij} \qquad (1)$$

$$\beta_{0j} = \gamma_{00} + \gamma_{0j}(\text{industry\_level\_variables}) + \mu_{0j} \qquad (2)$$

The dependent variable is the log odds of obtaining income for individual i in industry j (Eq. (1)). The vector β denotes the coefficients of the individual-level explanatory variables, β_{0j} is the intercept denoting the average odds, and ε_{0j} is the error term. In all models, the independent variables are all centered on their grand means, which makes the intercept a meaningful interpretation – the expected log odds of obtaining income for an "average" worker. In other words, the industries' means (i.e., the intercept) are adjusted for differences in demographic attributes and employment aspects of industries' incumbents and represent the expected odds of a worker whose characteristics are equal to the grand mean of all workers and not only to workers in his/her industry.

We are interested in particular in the association between industries' characteristics and mean odds of obtaining fringe benefits after adjusting the latter for cross-industrial variations in the composition of individual-level characteristics. We therefore test

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[4] The CBS defined goods and services as competitive when an industry's domestic production is above 20 percent of its own supply.

[5] The results are reported for the population average models with robust standard errors.

Table 2
Average annual earnings, fringe benefits, and indicators for advantageous positions for selected industries.

Industry	Annual earnings (NIS)	Pension (%)	KH (%)	Economic scale (NIS)	Large firms (%)	Unionized (%)	N
Textiles	59,060	82	29	353	16	57	82
Wood and furniture	57,880	57	23	200	0	65	115
Local government	71,840	97	96	399	51	93	632
Electric motors	79,548	89	43	332	11	67	104
Paper	87,662	94	71	393	52	65	52
Publishing and printing	83,280	72	36	214	11	63	151
Chemicals	100,286	90	65	845	20	86	97
Machinery and equipment	95,996	83	34	330	0	80	65
Electricity and water supply	142,125	98	77	570	93	73	174
Basic metal	139,015	91	72	575	59	56	239

whether the average worker's benefits are conditional on industries' characteristics in which workers are embedded. In more technical terms, we allow the level-1 intercept to vary across industries and in Eq. (2) we explain this between-industries variance. Thus, β_{0j} denotes industries' average odds of obtaining benefits and the industry-level coefficients can be interpreted as the increment to the intercept associated with industry characteristics. The slopes of the individual-level coefficients are not allowed to vary across industries.

One possible criticism of our argument on positional characteristics and rewards is that benefits may be linked to workers' skills and not, as we argue, to industries' structural positions. For instance, sorting and selection mechanisms may channel highly skilled workers to large firms. Therefore, higher wages and benefits in large firms may be due to the greater ability of workers in large firms, with higher levels of both measured and unmeasured human capital, and not necessarily due to their advantageous position. The analyses address this problem with hierarchical models through which we estimate the effects of industrial-level indicators on benefits net of the demographic attributes and employment aspects of industries' incumbents. Ideally, we could also control for individuals' educational enrollment, the prime measure for human capital. Yet we do not have data on workers' education (or occupation) at the individual level. Nevertheless, since the individual data includes information on earnings, which is in large part a function of both measured and unmeasured human capital, we can estimate the impact of industries' features on benefits net of the earnings components of industries' incumbents. Using earnings as a proxy for human capital is not without its drawbacks. Earnings, like benefits, are partly a product of workers' position in the labor market. For example,

discrimination, segmentation, and practices that secure economic privilege affect returns on education. Therefore, by including earnings as a proxy for human capital, we underestimate the structural effects of industries on benefits, some of which are captured by earnings.

5. Results

5.1. Descriptive overview

We first examine the variance between industries in the percentage of workers covered by benefits. The distribution of benefits between industries, presented in Fig. 2, suggests that some industries offer benefits to most of the workers, while other industries offer benefits only to selected groups of employees. For example, in public administration 99 percent of the workers are covered by pension, compared to only 37 percent in restaurant and dining services. Likewise, in the telecommunications industry 81 percent of workers are covered by KH, but only 21 percent in construction.

The variation in benefits between industries may be partly due to the higher skills of workers employed in public administration and telecommunications relative to that of workers employed in restaurant services and construction, yet it also most likely due to the differences between industries in their advantageous/disadvantageous positions. Table 2 demonstrates this point by comparing the percentage of workers covered by benefits between industries with a similar level of average earnings. In all pairs of industries, benefits are higher in industries that hold some advantageous position. To take one example, almost all workers employed in local government obtain KH (96 percent), while in the electric motors industry, where wages are higher than in
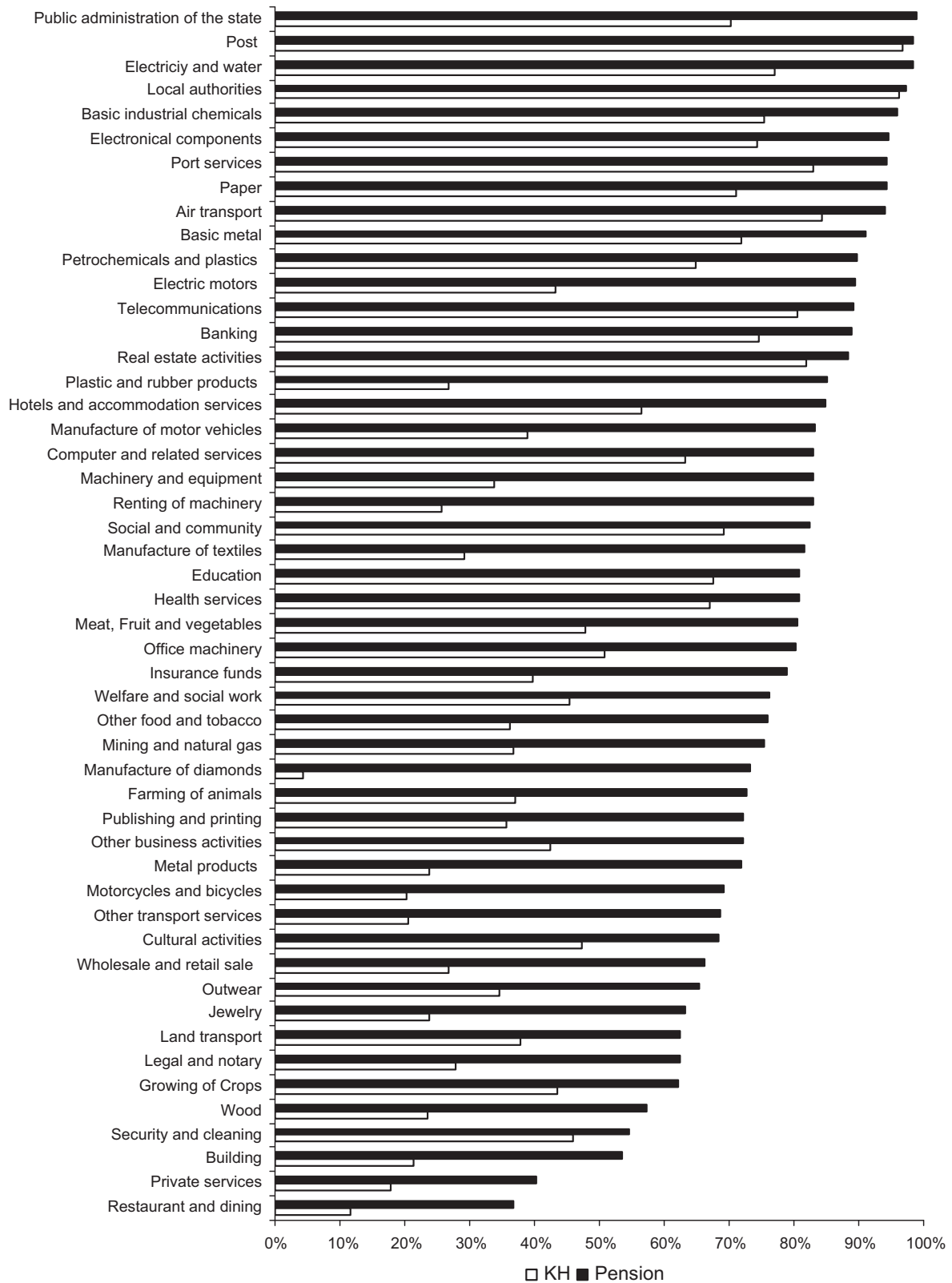
Fig. 2. The distribution of benefits across industries.

Table 3
Bivariate correlations of pension, KH, and industries' characteristics ($N = 50$).

	1	2	3	4	5	6	7	8	9	10
1. Pension	1.000									
2. KH	0.472	1.000								
3. Economic scale	0.218	0.199	1.000							
4. Export	0.051	−0.011	0.565	1.000						
5. Unionized	0.103	0.163	0.204	0.019	1.000					
6. Large firms	0.177	0.324	0.314	−0.058	0.456	1.000				
7. Public	0.231	0.313	0.047	−0.392	0.262	0.359	1.000			
8. Import	0.051	−0.013	0.450	0.668	0.156	−0.025	−0.361	−0.320		
9. Part-time	−0.066	0.013	−0.492	−0.331	0.102	0.242	0.303	−0.099	1.000	
10. Low-skill	−0.199	−0.223	−0.126	−0.012	0.056	−0.241	−0.428	0.168	−0.089	1.000

local government, only 43 percent of workers enjoy this benefit. These differences in benefits may be explained by public employment, high unionization, and the presence of internal labor markets in the local government. In other examples, even if we take those with no public sector, economic scale and firm's size seem to matter for benefits.

Prior to multivariate statistical analyses, Table 3 presents correlations between the main variables in our analysis – industrial characteristics and the percentages of workers that obtain income from fringe benefits in each industry. Consistent with the study's hypothesis, in industries with high values in economic scale, export (in the private sector), unionization, large firms, and public employment, a higher percentage of workers obtain pension and KH. Yet the relations between fringe benefits and industries' disadvantageous positions – competitive import and part-time employment – are close to zero, though we expected to find negative correlations. Regarding the correlations between industries' indicators, we find positive and strong correlations between economic scale and export. These strong correlations both among all industries and the private sector hint at the difficulties in finding separate effects for each indicator. The bivariate correlations between unionization, large firms and public employment are positive as expected, although less strong.

More importantly, to test if the rent-sharing and rent-extracting features of industries are empirically largely independent, we use factor analysis to construct indexes for the likelihood of rent-sharing (i.e., firms' profitability) and for the likelihood of rent-extraction (i.e., workers' bargaining power). The two indexes were constructed from the single principal component yielded by a factor analysis. We standardized the indexes and present their distributions by industry, sorted by the values of workers' bargaining power, in Fig. 3. The relatively low correlation between the unstandardized

indexes (0.269) is clearly evident in that there are several industries with an above-average score in the workers' bargaining power index and a below-average score in the firms' profitability index, and vice versa. Hence, Fig. 3 indicates that the rent-sharing and rent-extracting features of industries are empirically largely independent.

5.2. Hierarchical logistic models

Table 4 displays the results of hierarchical logistic equations that examine the net effect of individual-level and industry-level variables on the probabilities of obtaining pension and KH for the entire economy, the private sector, and manufacturing industries. We estimate a separate model for the private sector since the rent-sharing mechanism should be particularly relevant to private industries and manufacturing industries where the effect of the export and import indicators should be the strongest.

Evidently, industries' characteristics have a large effect on the mean worker's probabilities of obtaining fringe benefits, and in the expected directions. The odds of obtaining pension for the "average" worker are equal to 2.210 (model 1). These odds increase with an industry's economic scale, workplace size, and public employment and decrease with part-time employment and the presence of low skilled workers in the industry. Unionization was found to increases the odds of obtaining pension only in manufacturing industries. Industries' levels of export and import, however, do not affect workers' probabilities of obtaining pension.

The findings for KH suggest that rent-extraction (indicated by workers' bargaining power) is more relevant to explaining the odds of obtaining KH than rent-sharing (indicated by industries' sources of profitability). The mean worker's odds of obtaining KH increase in particular with the incidence of large firms and with public
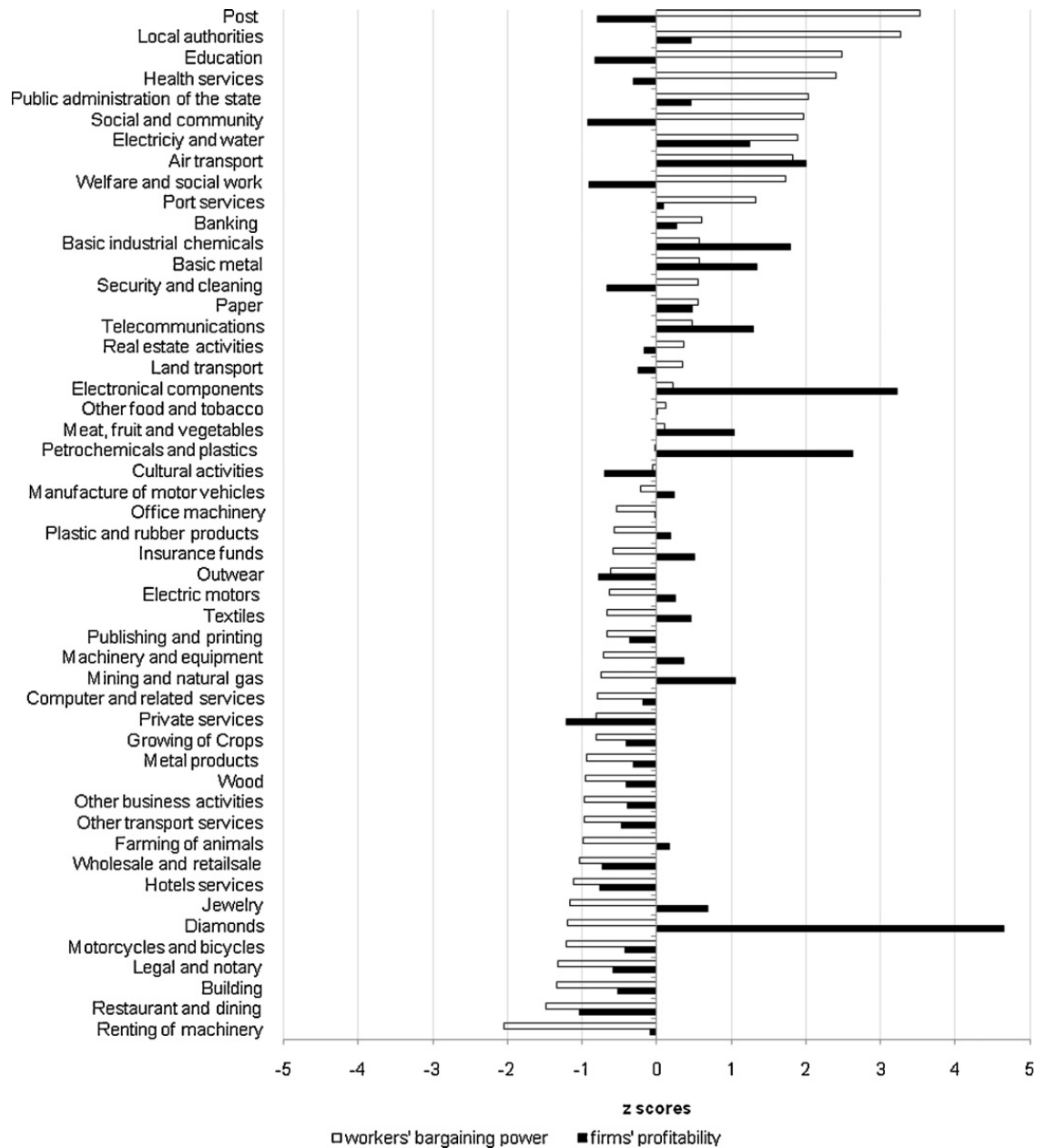
Fig. 3. The distribution of firms' profitability and workers' bargaining power across industries. *Note*: The workers' bargaining power index is designed to capture the likelihood of rent-extraction and is constructed from four variables: large firms, unionized, public employment, and part-time. The firms' profitability index is designed to capture the likelihood of rent-sharing and is constructed from three variables: economic scale, export, and competitive import.

employment. The premiums associated with these variables are hardly trivial. For example, workers employed in industries with a high incidence of large firms, such as basic industrial chemicals (67 percent employed in large firms), have odds of obtaining KH more than two times higher than those of workers employed in plastic and rubber (20 percent employed in large firms). Employers are also less likely to offer KH to all workers in industries with a high incidence of part-time workers, in particular in the public sector. This may reflect the fact that although allocations to KH are usually determined in

industrial or occupational collective agreements, coverage is extended mainly to workers employed in standard employment relations. Like pension, unionization was found to increase the odds of obtaining KH only in manufacturing. Supporting the study's hypothesis, high values of competitive import and low-skilled workers decrease the odds of obtaining KH in manufacturing. Yet, contrary to our expectations, the interaction between import and low skill is positive (although relatively small compared to the negative effects of import and low-skilled workers). Nevertheless, if we take the textiles

Table 4
Odds ratios from hierarchical logit regressions of the probabilities of attaining pension and KH, workers age 25–64, 1998.

	Pension			KH		
	Entire economy	Private sector[a]	Manufac.	Entire economy	Private sector[a]	Manufac.
	I	II	III	IV	V	VI
Individual-level effects						
Intercept	2.210**	2.935**	1.506	0.353**	0.362**	0.201**
Age	1.047*	1.031	1.005	1.018	1.004	1.024
Age ^{2}	1.000	1.000	1.000	1.000	1.000	1.000
Female	1.546**	1.442**	1.804**	2.045**	1.529**	1.659**
Unmarried	0.843**	0.857*	0.630**	0.945	0.951	0.920
New immigrant	0.943	1.026	1.174	0.745**	0.724**	0.618**
Months of employment	0.955**	0.960**	0.929**	0.907**	0.900**	0.890**
Daily workers	0.507**	0.841	1.514	0.605**	0.694*	0.946
Manager	1.319**	1.391**	0.647*	0.361**	0.316**	0.129**
(Ln) Wage and salary	4.454**	4.520**	8.286*	3.237**	3.615**	4.921**
Industrial-level effects on the intercept						
Economic scale	1.001**	1.001**	1.001**	1.000	1.000	1.001*
Export	0.997	0.997		0.999	0.999	
Large firms	1.011**	1.012**	1.011	1.028**	1.026**	1.024**
Unionized	1.000	0.997	1.017**	1.001	1.001	1.025**
Public employment	1.019**	–	–	1.016**	–	–
Import	1.006	1.000		1.013	1.003	0.968**
Part-time	0.980**	0.991		0.980**	1.004	
Low-skill	0.998	0.990**		1.003	0.993	0.957**
Import × low-skill	1.000	1.000*		1.000	1.000	1.001**
Chi-square	429**	160**	74**	864**	348**	21*
N (Individuals)	15,890	10,309	2,448	15,890	10,309	2,448
N (Industries)	50	42	20	50	42	20

[a] We define private sector industries as those with less than 50 percent of their workers employed in public employment.

* $P < .10$.

** $P < .05$ (two-tailed tests).

industry, for example, where 38 percent of the output comes from competitive import and 47 percent of the workers have less than 12 years of schooling, the mean worker's estimated odds of obtaining KH are close to zero.

While the main interest of the paper is in demonstrating structural effects, the findings indicate that workers' demographic attributes also affect the odds of obtaining pension and KH, independently of their earnings. This is most evident with regard to gender.[6] We find that

women's odds of obtaining pension and KH are, respectively, 1.55 and 2.04 times higher than men's. This is only in part due to the high percentage of women who are employed by the government (almost twice as many as men), where the odds of obtaining fringe benefits are relatively high. Even in the private sector, women's odds of obtaining pension and KH are still 1.44 and 1.53 times higher than men's. Women's advantage in benefits suggests that the overall gender pay gap in favor of men is actually smaller than indicated by wages alone (Levy, 2006; Solberg & Laughlin, 1995), and may imply that jobs chosen by women have higher benefits than those chosen by men.

To test whether women's advantage in benefits is conditioned by industries' characteristics, we added cross-level interactions variables in Table 5. Since a random term for gender effect is significantly different from zero (data not shown), which means that the effect of gender on the odds of obtaining benefits are not the same across industries, we analyzed the effects of industrial-level variables on women's odds of obtaining benefits

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[6] We can hypothesize that in addition to gender, ethnicity, nationality and religious conviction (namely, ultra orthodox Jews) also affect the odds of obtaining benefits. However, there is no information in the tax dataset on workers' religion or nationality (i.e., whether they are Jews or Arabs, secular or ultra-Orthodox). Given previous research on Arabs' disadvantages in Israel's labor market (e.g., Lewin-Epstein and Semyonov, 1994), we include a measure of the percentage of non-Jewish workers at the industry level (data from the Labor Force Survey). The effect of this variable was not statistically significant in any of the regressions.

Table 5
Odds ratios from hierarchical logit regressions of the probabilities of attaining pension and KH, workers age 25–64, 1998.

	Pension		KH	
	Entire economy	Private sector	Entire economy	Private sector
	I	II	III	IV
Individual-level effects				
Intercept	2.400**	3.287**	0.369**	0.392**
Age	1.046**	1.032	1.017	1.005
Age^2	1.000	1.000	1.000	1.000
Female	1.056	1.240	1.892**	2.344**
Unmarried	0.848**	0.856*	0.972	0.954
New immigrant	0.942	1.023	0.764**	0.727**
Months of employment	0.955**	0.960**	0.910**	0.900**
Daily workers	0.513**	0.846	0.603**	0.697*
Manager	1.305*	1.393**	0.332**	0.324**
(Ln) Wage and salary	4.462**	4.542**	3.247**	3.583**
Industrial-level effects on the intercept				
Economic scale	1.001**	1.001**	1.000	1.000
Export	0.996	0.996	0.999	0.998
Large firms	1.012**	1.012**	1.028**	1.026**
Unionized	1.000	0.997	1.000	1.001
Public employment	1.017**		1.016**	
Import	1.008	1.001	1.011	1.003
Part-time	0.980*	0.991	0.982*	1.001
Low-skill	0.997	0.989**	1.003	0.993
Import × low-skill	1.000	1.000	1.000	1.000
Industrial-level effects on female				
Economic scale	0.999*	0.999*	0.999	0.999**
Export	1.002	1.001	1.002	1.003
Large firms	1.005	1.006	1.002	1.006
Unionized	0.999	1.000	0.998	0.997
Public employment	1.010**	–	1.015**	–
Import	1.015	1.013	0.998	1.003
Part-time	0.981**	0.975**	0.951**	0.951**
Low-skill	1.019**	1.017**	1.014**	1.015**
Import × low-skill	1.000	1.000	1.000	1.000
Chi-square	332.1**	130.4**	725.0**	318.5**
Chi-square	54.3*	40.3	135.4**	43.6
N (individuals)	15,890	10,309	15,890	10,309
N (industries)	50	42	50	42

* $P < .10$.
** $P < .05$ (two-tailed tests).

relative to men (by industrial-level effects on the gender coefficient). The results show that women's advantage in pension is entirely explained by industries' characteristics, although for KH there is still a significant gender gap in favor of women. Women are less likely to obtain benefits, relative to men, in industries with a high presence of part-time employment. By contrast, women are more likely to obtain pension, relative to men, in industries that are characterized by bureaucratic employment environments such as those at large firms and in public employment. Gender-based occupational differences might explain this finding, since women are overrepresented in white-collar occupations that are closely tied

to bureaucratic employment environments. Secretaries, elementary school teachers, and nurses, for instance, are disproportionately women.

All in all, the findings suggest that incomes from fringe benefits are not uniformly distributed among all groups of workers. Benefits are a function of the industries featured and workers' demographic and employment characteristics. Net of workers' demographic and human capital characteristics, workers employed in industries that enable rent-sharing (i.e., economic scale) or rent-extraction (i.e., unionization, large firms, and public sector employment) practices are more likely to obtain pension and KH. Disadvantageous

positions, in particular part-time employment, decrease workers' likelihoods of obtaining benefits. In the next section, we analyze the implications of the unequal distribution of benefits for the level of income inequality among workers and between income clusters.

6. Income inequality among workers and between income clusters

On the whole, the vast majority of research on income inequality has examined wages and fringe benefits separately. Separate analyses, however, may either underestimate or overestimate the level of income inequality among workers. Since we find that high-wage workers are more likely to obtain fringe benefits, this should further widen the disparities arising from wage differentials. Inequality levels resulting from wages and benefits should also be higher because the level of income from fringe benefits is positively correlated with the wage level (employers' allocations to fringe benefits are in proportion to the wage level).

The dataset includes an estimation of the monetary value of fringe benefits, which usually is not readily available, and therefore enables us to test their effect on the inequality level. While admittedly crude, the inequality levels presented in Fig. 4 are perhaps the nearest to the overall level of income inequality among workers. We use the Gini coefficient as the measure for
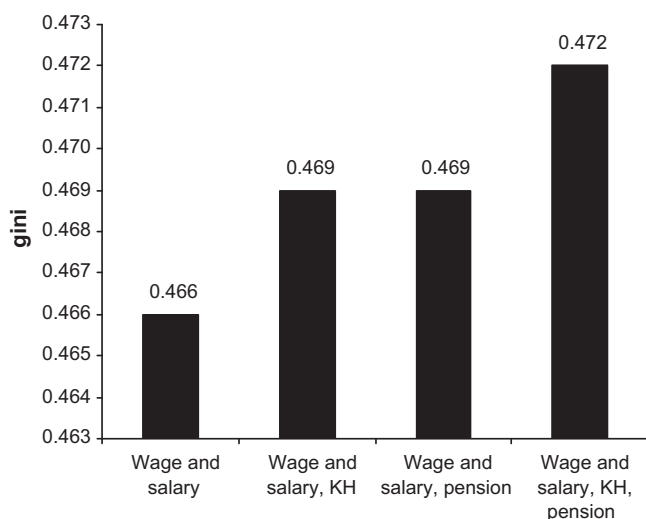

Fig. 4. Annual income inequality among workers, wage and salary workers age 25–64, 1998 (Income from KH is calculated as 7.5 percent of the annual base from which employers' allocate to KH. This annual base for allocation is not identical to annual income from wage and salary. The correlation between the base for allocation and annual income from wage and salary is 0.639. Income from pension is calculated as 12 percent of the annual base from which employers' allocate to pension. The correlation between the base for allocation and annual income from wage and salary is 0.801).

inequality in annual income. Other inequality measures, such as the ratio between income at the 90th percentile and at the 10th percentile, reveal similar results (data not shown).

The inequality levels show that measures of income inequality, which do not take into account benefits, underestimate the level of inequality in total compensation. The inequality level is lowest for earnings only (0.466). Since all workers earned wage but only some of them receive benefits, inequality in fringe benefits is extremely high and equal to 0.581, 25 percent higher than earnings inequality (data not shown). Due to the positive correlations between wage and benefits, each of them raises the inequality level. Adding both pension and KH to wages increases inequality to 0.472, 1.3 percent higher than the level of inequality based solely on wages. However, this figure (0.472) is an underestimation because it does not include the value of budgetary pension among public sector employees. Nevertheless, this is not a trivial rise, especially if we compare it to the overall 8.3 percent rise in the Gini coefficient in Israel in the 1990s (from 0.326 in 1989 to 0.353 in 1999 (Kristal & Cohen, 2007)) or the 8.9 percent rise in household income inequality in the U.S. during approximately the same years (Luxembourg Income Study (LIS) Key Figures).

One could argue that inequality caused by income from wages and that stemming from benefits simply accumulates, and therefore the findings merely demonstrate that inequality is greater than often considered. However, there is an important qualitative difference between the general inequality caused by wage disparities and that stems from benefits. We argue that the composition of workers' income package (i.e., the level of benefits they receive, if at all) affects their position on various public policies (an issue to which we will return in Section 7), as well as the degree to which they are protected from such social risks as sickness, unemployment and aging. Thus, the social positions of individuals who receive fringe benefits and those who do not are different. The former are less reliant on state policy, and are more likely to be secure when confronting social and economic risks. The latter are more reliant on the state and less secure in the market environment. Thus, the inequality revealed here accentuates the distinction between 'insiders' and 'outsiders' affecting equality and insecurity alike (Rueda, 2007).

In the Israeli context, we can distinguish between at least three income-based categories. The bottom tier, which is typically associated with "bad" jobs, includes groups of workers who obtain their income from wage and salary only. These workers are usually employed in
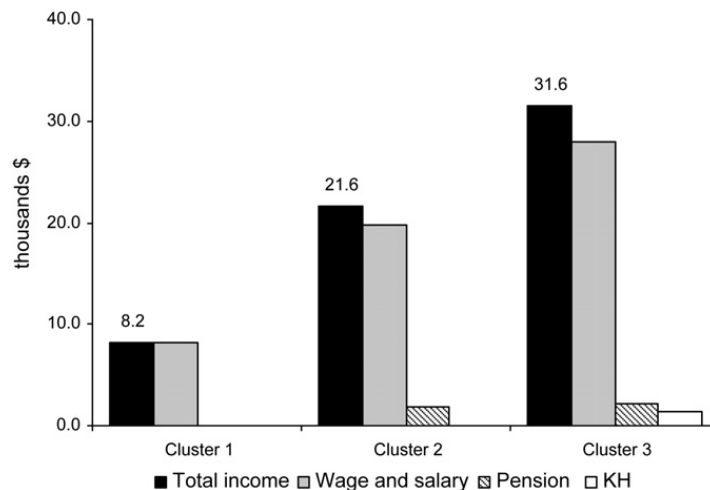
Fig. 5. Average incomes from wage, pension, KH, and capital by income-based cleavages (Cluster 1 includes workers with income only from wages (N = 3409). Cluster 2 includes workers with additional income from pension (N = 4361). Cluster 3 includes workers with additional income from both pension and KH (N = 7619)).

industries characterized by low profitability or in small business firms, where many workers are employed part-time. It is reasonable to assume that the size of this bottom tier is underestimated in the current study since the tax dataset does not include information on labor migrants (9.7 percent of the workforce in 1998 according to the Bank of Israel (2000)) who are employed primarily in care-work, construction, and agriculture. The second and third income tiers are typically associated with "good" jobs; the second contains groups of workers that are covered by employer-provided pension, the third those that also obtain income from KH (only a negligible minority receives only KH and no pension). These jobs are usually in industries with large "core" business firms, in the public sector, or in unionized industries.

In Fig. 5, we present the observed annual income for these three income-based clusters. The most conspicuous finding is their significantly different income levels. Not only do workers belonging to the first cluster obtain income from wage and salary only, but their average income from wage and salary is significantly lower than that of the other clusters. By contrast, workers belonging to the third cluster obtain income from both pension and KH. The average income level of the third income cluster from all income sources is 146 percent higher than the second cluster, and 386 percent higher than the first. The low annual income of workers who obtain income from wages only is partly due to the lack of stability in their employment since they are employed only 7.8 months on average. Yet the average monthly income of the third income cluster from all income sources is still 268 percent higher than that of the first cluster. Thus, industries' hierarchical positions, which

explain workers' likelihood of obtaining benefits, result in groups of workers that significantly differ in their well being.

The above discussion assumes that workers can only obtain wages and fringe benefits, while in fact a growing proportion of workers, normally at the top of the earnings distribution, enjoy capital income (Piketty & Saez, 2003). The tax dataset also includes partial data on capital income. Because in 1998 capital gains from securities and interest on deposits were nontaxable in Israel,[7] the tax dataset underestimates the scale and scope of capital income, and the data is available for only 1.4 percent of the sample (224 individuals) and only for capital income from rent and dividends. We therefore decided not to present the capital income data in the main analysis, tables and figures. Yet our analysis (not shown) suggests that even these partial data reveal that once capital income is considered, income inequality rises even higher: from .466 (only wages) to .472 (wages and fringe benefits) to .476 (wages, benefits, and capital).

Thus, a fourth income tier, still relatively small but increasing, should be added to Fig. 5, for workers obtaining not only wages and benefits, but rather enjoying income from all sources: wages, benefits and capital income. Our data suggests that workers in this most advantaged income group are located in jobs that are mainly associated with top managers in highly profitable industries. Their mean income from all sources is nearly 10 times greater than the mean income of those in "bad"

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[7] In 2003 income tax on capital gains from the Tel-Aviv Stock Exchange market and interest on deposits was introduced.

jobs, and over twice as much as those in "good jobs (i.e., those obtaining wages and both pension and KH).

7. Discussion and conclusions

The interplay among the structural characteristics of industries, fringe benefits, and inequality lies at the center of our study. Our key argument is that benefits are the result of practices of rent-extraction and rent-sharing by workers. To test our argument, we construct measures that typify the likelihood of rent-sharing by industries' sources of profitability (i.e., economic scale, export) and rent-extraction by workers' bargaining power (i.e., unionization, employment relations, public employment). We use the industrial data in hierarchical logistic models to estimate the impact of industries' characteristics on workers' likelihood of obtaining benefits net of the demographic attributes and human capital aspects of industries' incumbents. We find that the mean worker's odds of obtaining pension and KH increase with an industry's economic scale, workplace size, unionization, and public employment and decrease with part-time employment. We are led to conclude that mechanisms of rent-sharing and rent-extraction explain benefits differences for equally paid (hence equally skilled) workers across industries. Our findings thus support structural accounts of inequality by demonstrating that there are important variations in income that cannot be entirely explained by standard competitive theories of income determination. Although Israel has its own historical uniqueness, we believe that the Israeli experience has wide applicability and that the theoretical arguments and findings could certainly be the basis for further research in other industrial countries.

The findings further imply that fringe benefits combine with earnings to stratify workers, and even more importantly, benefits are indicative of structural positions in society. Since these positions relate not only to the employment contract, but also to firms' advantageous positions in the product market, the level of fluidity between income clusters may be lower compared to the chances of mobility between occupational classes in Israel (Yaish, 2000). The more fundamental question, of course, is whether the underlying structure of rent-extraction and rent-sharing will come to shape how interests are understood and pressed (Sørensen, 1996, 2000). Although income classes may not necessarily provide a better indication of life conditions compared to occupational classes (Grusky & Sorensen, 1998; Weeden & Grusky, 2005), we wish to emphasize their likely implication for the diversification in workers' short-term economic interests.

Three recent examples of adversarial interests that have emerged from the diversification of positions among Israeli workers stand out. First, workers who obtain pension financed by their employer have no "objective" interest in supporting social legislation to ensure mandatory pension whereby all employers are legally obliged to provide pension to their workers. While such fragmentation of interests is difficult to measure and therefore remains somewhat speculative, there are other examples of real fragmentation that lend support to the first. In 2000, an attempt was made to levy a tax on allocations to KH, which failed due to strong objection by the *Histadrut.* More recently, there have been attempts to raise the tax on another workplace benefit – the company car. Again, the *Histadrut* has taken part in efforts to thwart this reform. In this context, the *Histadrut* is voicing the interests of workers with "good jobs" and seeking to preserve group-specific benefits. These examples demonstrate that workers belonging to certain income clusters may follow their own specific economic interests. Given the fragmentation of the working class into qualitatively distinct categories with little mobility between them, the interests of one group concerning labor legislation and tax policies may easily be contradictory to those of other income clusters.

These Israeli examples are relevant to other countries too. In the U.S., the most obvious example is universal healthcare insurance. Since most high-income workers in the U.S. get healthcare insurance from their employers, they have no "objective" interest in supporting a universal system of public healthcare, which would be funded out of their taxes. That, however, clashes with the current high healthcare costs that apply to high-income workers as well. Nevertheless, recent polls show that people aged 65 and over, who are covered by Medicare (universal public health insurance coverage for the elderly), are more likely to oppose government healthcare.[8] Another example is provided by Morgan and Cha (2007), who argue that as a result of the increasing income from capital during the 1990s some workers may have become less likely to support policies aligned with working-class interests.

Thus, although workers who obtain rents in the form of benefits should be regarded as occupying "privileged appropriation locations within exploitation relations" (Wright, 1997, p. 22), rents have further implications for working-class cohesion and the strength of the labor movement. The unequal distribution of income from

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[8] http://www.fivethirtyeight.com/2009/10/older-and-wealthier-people-are-more.html.

fringe benefits has not only widened the economic disparities between various groups of workers, but similar to contradictory class locations, has most likely also become a crucial divisive element, undermining the basis for broader social solidarity, and resulting in a weaker labor movement (Gordon et al., 1982; Wright, 1979). In other words, the unequal distribution of income sources, as a result of unequal positions, institutionalizes cleavages with antagonistic interests among workers, thereby reducing the likelihood of working class cohesion and collective action. This, in turn, may affect the role of class and class-related political parties in government policymaking.

References

Ackerlof, G., & Yellen, J. (1986). *Efficiency wage models of the labor market*. New York: Cambridge University Press.

Bank of Israel (2000). *Annual report 1999*. Jerusalem.

Baron, J. N., & Bielby, W. T. (1984). The organization of work in a segmented economy. *American Sociological Review*, *49*(4), 454–473.

Bernard, A. B., & Bradford, J. J. (1995). Exporters, jobs, and wages in U.S. manufacturing: 1976–1987. *Brookings Papers on Economic Activity: Microeconomics*, 67–119.

Blanchflower, D. G., Oswald, A. J., & Sanfey, P. (1996). Wages, profits, and rent-sharing. *Quarterly Journal of Economics*, *111*(1), 227–252.

Borjas, G. J., & Ramey, V. A. (1994). Time-series evidence on the sources of trends in wage inequality. *American Economic Review*, *84*(2), 10–16.

Bowles, S., & Gintis, H. (1990). Contested exchange. *Politics and Society*, *18*(2), 165–222.

Brown, C., Hamilton, J., & Medoff, J. (1990). *Employers large and small*. Cambridge: Harvard University Press.

Buchmueller, T. C., Dinardo, J., & Valletta, R. G. (2002). Union effects on health insurance provision and coverage in the United States. *Industrial and Labor Relation Review*, *55*(4), 610–627.

Budd, J. W. (2004). Non-wage forms of compensation. *Journal of Labor Research*, *25*(4), 597–622.

Cain, G. G. (1976). The challenge of segmented labor market theories to orthodox theory. *Journal of Economic Literature*, *14*(4), 1215–1257.

Cohen, Y., Haberfeld, Y., Mundlak, G., & Saporta, I. (2003). Unpacking union density: membership and coverage in the transformation of the Israeli industrial relations system. *Industrial Relations*, *42*(4), 692–711.

Cohen, Y., & Haberfeld, Y. (1993). Temporary help service workers: employment characteristics and wage determination. *Industrial Relations*, *32*(2), 272–287.

Cohen, Y., & Stier, H. (2006). The rise in involuntary part time workers in Israel. *Research in Social Stratification and Mobility*, *24*, 41–54.

Dahan, M. (2003). Mandatory pension. *The Economic Quarterly*, *50*(3), 511–528 [Hebrew]

DiPrete, T. A., Goux, D., & Maurin, E. (2002). Internal labor markets and earnings trajectories in the post-fordist economy: An analysis of recent trends. *Social Science Research*, *31*, 175–196.

Doeringer, P., & Piore, M. (1971). *Internal labor markets and manpower analysis*. Lexington, DC: Heath.

Doron, A., & Kramer, R. M. (1991). *The welfare state in Israel*. Oxford: Westview Press.

Esping-Andersen, G. (1990). *The three worlds of welfare capitalism*. Princeton: Princeton University Press.

Farber, H. (2005). Nonunion wage rates and the threat of unionization. *Industrial and Labor Relations Review*, *58*(3), 335–352.

Freeman, R. B. (1981). The effect of unionism on fringe benefits. *Industrial and Labor Relations Review*, *34*, 489–509.

Freeman, R. B., & Medoff, J. L. (1984). *What do unions do?* New York: Basic Books.

Gabai, Y., & Rob, R. (2002). The Import-Liberalization and Abolition of Devaluation Substitutes Policy: Implications for the Israeli conomy. In Avi Ben Basat (Ed.), *The Israeli Economy 1985-1998: From Government Intervention to Market Economics* (pp. 281–308). Cambridge: MIT Press.

Gal, J., & Bargal, D. (2002). Critical junctures, labor movements and the development of occupational welfare in Israel. *Social Problems*, *49*(3), 432–454.

Gordon, D. M., Edwards, R., & Reich, M. (1982). *Segmented work divided workers*. New York: Cambridge University Press.

Grusky, D. B., & Sorensen, J. B. (1998). Can class analysis be salvaged? *American Journal of Sociology*, *103*(5), 1187–1234.

Guthrie, D., & Roth, M. L. (1999). The state, courts, and maternity policies in U.S. organizations: Specifying institutional mechanisms. *American Sociological Review*, *64*(1), 41–63.

Hacker, J. S. (2002). *The divided welfare state: The battle over public and private social benefits in the United States*. Cambridge: Cambridge University Press.

Hollister, M. N. (2004). Does firm size matter anymore? The new economy and firm size wage effects. *American Sociological Review*, *69*(5), 659–676.

Israel. (1982). *Retirement insurance by employers*. Statistical Bulletin of Israel, Suppl. 3. Jerusalem: Central Bureau of Statistics.

Israel. (2005). *Social survey 2002 – Pension arrangements and savings for retirement*. Social Indicators number 9. Jerusalem: Central Bureau of Statistics.

Jencks, C., Perman, L., & Rainwater, L. (1988). What is a good job? A new measure of labor-market success. *American Journal of Sociology*, *93*(6), 1322–1357.

Kalleberg, A. L. (2000). Nonstandard employment relations: part-time, temporary, and contract work. *Annual Review of Sociology*, *26*, 341–365.

Kalleberg, A. L. (2003). Flexible firms and labor market segmentation: Effects of workplace restructuring on jobs and workers. *Work and Occupations*, *30*, 154–175.

Kalleberg, A. L., Reskin, B. F., & Hudson, K. (2000). Bad jobs in America: Standard and nonstandard employment relations and job quality in the United States. *American Sociological Review*, *65*(2), 256–278.

Kalleberg, A. L., & Van Buren, M. E. (1996). Is bigger better? Explaining the relationship between organization size and job rewards. *American Sociological Review*, *61*(1), 47–66.

Kalleberg, A. L., Wallace, M., & Althauser, R. P. (1981). Economic segmentation, worker power, and income inequality. *American Journal of Sociology*, *87*(3), 651–683.

Kosenko, K. (2007). Evolution of business groups in Israel: Their impact at the level of the firm and the economy. *Israel Economic Review*, *5*(2), 55–93.

Kristal, T. (2008). *Labor's share of national income and the diversification in workers' sources of income*. Ph.D. Dissertation. Tel Aviv University.

Kristal, T., & Cohen, Y. (2007). Decentralization of collective wage agreements and rising wage inequality in Israel. *Industrial Relations*, *46*(3), 613–635.

Krueger, A. B., & Summers, L. H. (1988). Efficiency wages and the inter-industry wage structure. *Econometrica*, *56*(2), 259–293.

Leicht, T. K. (1989). On the estimation of union threat effects. *American Sociological Review*, *54*(6), 1035–1047.

Levy, H. (2006). Health insurance and the wage gap. *NBER working paper no*. 11975.

Lewin-Epstein, N., & Semyonov, M. (1994). Sheltered labor markets, public sector employment, and socioeconomic returns of Arabs in Israel. *American Journal of Sociology*, *100*(3), 622–651.

Lord, G., & Falk, W. (1982). Hidden income and segmentation: Structural determinants of fringe benefits. *Social Science Quarterly*, *63*, 208–224.

Maman, D. (1999). The social organization of the Israeli economy: A comparative analysis. *Israel Affairs*, *5*(2–3), 87–102.

McGovern, P., Smeaton, D., & Hill, S. (2004). Bad jobs in Britain: Nonstandard employment and job quality. *Work and Occupations*, *31*(2), 225–249.

Moller, S., & Beth, A. R. (2008). The contours of stratification in service-oriented economies. *Social Science Research*, *37*(2008), 1039–1060.

Morgan, S. L., & Cha, Y. (2007). Rent and the evolution of inequality in late industrial United States. *American Behavioral Scientist*, *50*(5), 677–701.

Mundlak, G. (2007). *Fading corporatism: Israel's labor law and industrial relations in transition*. Ithaca: ILR Press.

Nadiv, R. (2004). *Internal Labor Market of External Workers*. Tel Aviv University: Ph.D. Dissertation [Hebrew].

OECD. (2000). *OECD Economic Outlook*. OECD Publishing.

O'Rand, A. M. (1986). The hidden payroll: Employee benefits and the structure of workplace inequality. *Sociological Forum*, *1*(4), 657–683.

O'Rand, A. M., & MacLean, V. M. (1986). Labor markets, pension rule structure, and retirement benefits for long-term employees. *Social Forces*, *65*, 134–141.

Pfeffer, J., & Cohen, Y. (1984). Determinants of internal labor markets in organizations. *Administrative Science Quarterly*, *29*, 550–572.

Piketty, T., & Saez, E. (2003). Income Inequality in the United States, 1913–1998. *The Quarterly Journal of Economics*, *118*(1), 1–39.

Pierce, B. (2001). Compensation inequality. *The Quarterly Journal of Economics*, *116*(4), 1493–1525.

Raudenbush, S. W., & Bryk, A. S. (2002). *Hierarchical linear models*. Thousand Oaks, CA: Sage Publications.

Reid, W. L., & Beth, A. R. (2003). Integrating economic dualism and labor market segmentation: The effects of race, gender, and structural location on earnings, 1974–2000. *The Sociological Quarterly*, *44*(3), 405–432.

Revenga, A. L. (1992). Exporting jobs? The impact of import competition on employment and wages in U.S. manufacturing. *The Quarterly Journal of Economics*, *107*(1), 255–284.

Rueda, D. (2007). *Social democracy inside out: Partisanship and labor market policy in industrialized democracies*. Oxford: Oxford University Press.

Shalev, M. (1992). *Labour and the political economy in Israel*. Oxford: Oxford University Press.

Shalev, M. (1996). Introduction. In M. Shalev (Ed.), *The privatization of social policy?* (pp. 1–23). New York: St. Martin's Press.

Smith, A. (1937). *The wealth of nations*. New York: Modern Library. [1776].

Smith, V. (1997). New forms of work organization. *Annual Review of Sociology*, *23*, 315–339.

Solberg, E., & Laughlin, T. (1995). The gender pay gap, fringe benefits, and occupational crowding. *Industrial and Labor Relations Review*, *48*(4), 692–708.

Sørensen, A. B. (1996). The structural basis of social inequality. *American Journal of Sociology*, *101*(5), 1333–1365.

Sørensen, A. B. (2000). Toward a sounder basis for class analysis. *American Journal of Sociology*, *105*(6), 1523–1558.

Sørensen, A. B., & Kalleberg, A. L. (1981). An outline of a theory of the matching of persons to jobs. In I. Berg (Ed.), *Sociological perspectives on labor markets* (pp. 49–74). New York: Academic Press.

Spivak, A. (2002). Pension fund reform. In A. B. Basat (Ed.), *The Israeli economy 1985–1998: From government intervention to market economics* (pp. 221–242). Cambridge: MIT Press.

Terkel, E., & Spivak, A. (2001). Pension coverage in Israel. *The Economic Quarterly*, *48*(3), 317–334 [Hebrew].

Weeden, K. A. (2002). Why do some occupations pay more than others? Social closure and earnings inequality in the United States. *American Journal of Sociology*, *108*(1), 55–101.

Weeden, K. A., & Grusky, D. B. (2005). The case for a new class map. *American Journal of Sociology*, *111*(1), 141–212.

Wright, E. O. (1979). *Class, crisis, and the state*. London: Verso.

Wright, E. O. (1997). *Class counts*. Cambridge: Cambridge University Press.

Yaish, M. (2000). Old debate, new evidence: Class mobility in Israeli society, 1974–1991. *European Sociological Review*, *16*(2), 159–183.