

Good Intentions,

Bad Outcomes:

Social Policy, Informality and Economic Growth in Mexico

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Background

1.) Two aspects of social policy need to be jointly considered:

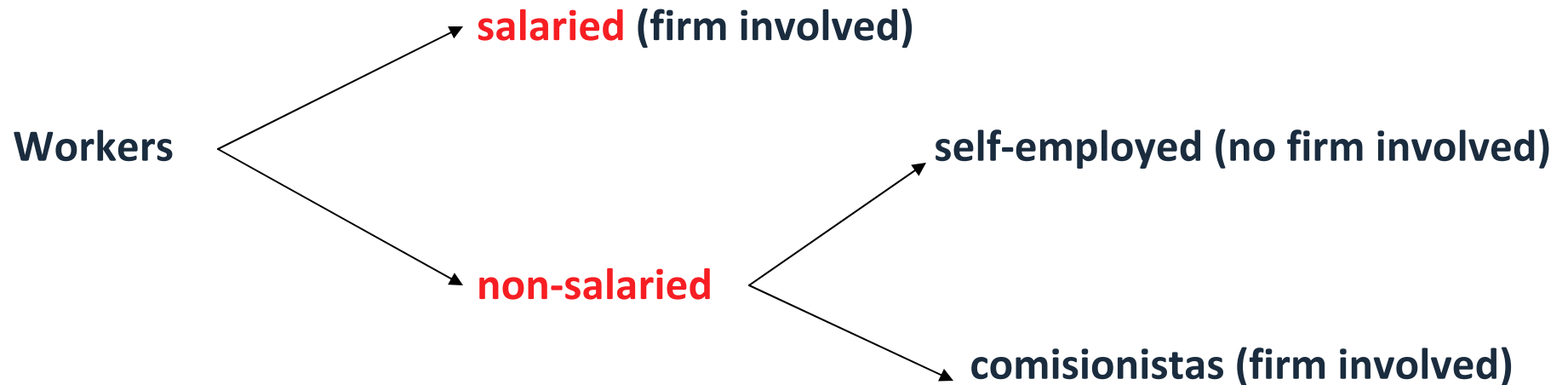
- its impact on social indicators properly (how effectively are workers protected against risks, how effectively is income being redistributed, how human capital is accumulated and so on); and,
- its impact on incentives to workers and firms along dimensions that affect productivity and growth.

2.) These issues are relevant to:

- the effectiveness of social programs;
- understand the “productivity puzzle” in LAC; and,
- poverty and the “post-CCT” discussion.

Institutions, Workers and Social Programs

Mexico's laws make a fundamental distinction between salaried and non-salaried labor



Salaried workers have a boss/firm and are paid a wage; there is a relationship of subordination.

Non-salaried workers are self-employed, or have non-subordinated relationships with firms: contracts to elicit effort or share risk, with commissions, profit-sharing or other pay structures.

Social security and social protection:

Social security Benefits are **bundled and obligatory**. Its costs per worker are:

$T_f =$ [health insurance \oplus retirement pensions \oplus disability pensions \oplus life insurance \oplus work-risk pensions \oplus day care centers \oplus housing loans \oplus contingent costs of severance pay \oplus transaction costs of compliance].

Workers' valuations depend on preferences, access and quality of services, and so on. Let $\beta_f \in [0,1]$ denote the value to the worker of social security benefits. The **utility** of a salaried job is:

$$U_f = w_f + \beta_f T_f$$

Note: T_f includes labor regulations

Social protection Benefits are **unbundled and voluntary**. Its costs per worker are:

$T_i =$ [health + retirement pensions + day care + housing]

The **utility** of a non-salaried job is:

$$U_i = w_i + \beta_i T_i$$

NOTE: Poverty programs \neq social protection

Labor market implications of social programs

Total Costs and Benefits of Salaried and Non-Salaried Labor

	Salaried labor	Non-salaried labor
Costs to firms	$w_f + T_f$	w_i
Benefits to workers	$w_f + \beta_f T_f$	$w_i + \beta_i T_i$

Econometric estimates suggest that for unskilled workers:

Tax on salaried labor = $(1 - \beta_f)T_f \approx 26\%$ of the formal wage rate

Subsidy to non-salaried labor = $\beta_i T_i \approx 8\%$ of the informal wage rate

The total tax-cum-subsidy to salaried vs. non-salaried unskilled labor implicit in Mexico's social programs is in the order of 34%.

Formality and Informality

“Informality is a term that has the dubious distinction of combining maximum policy importance and political salience with minimal conceptual clarity and coherence in the analytical literature”. Kanbur (2009).

Definitions:

- I follow Kanbur (2009) defining formality **with respect to “a” regulation**. I focus on social policy, so the **relevant** regulation in this case is coverage of social security.
- Formality and informality result from the intersection of the ambit of application of that regulation, and its enforcement.

Regulation: workers should have coverage of social security

	Applicable (salaried workers)	Not applicable (non-salaried workers)
<u>Enforcement</u>: firms should enroll workers in social security	Salaried worker enrolled by firm in social security Formal & legal	Self-employed and comisionistas before adjusting to regulation Informal & legal
	Salaried workers <u>not</u> enrolled by firm in social security Informal & illegal	Self-employed and comisionistas after adjusting to regulation Informal & legal

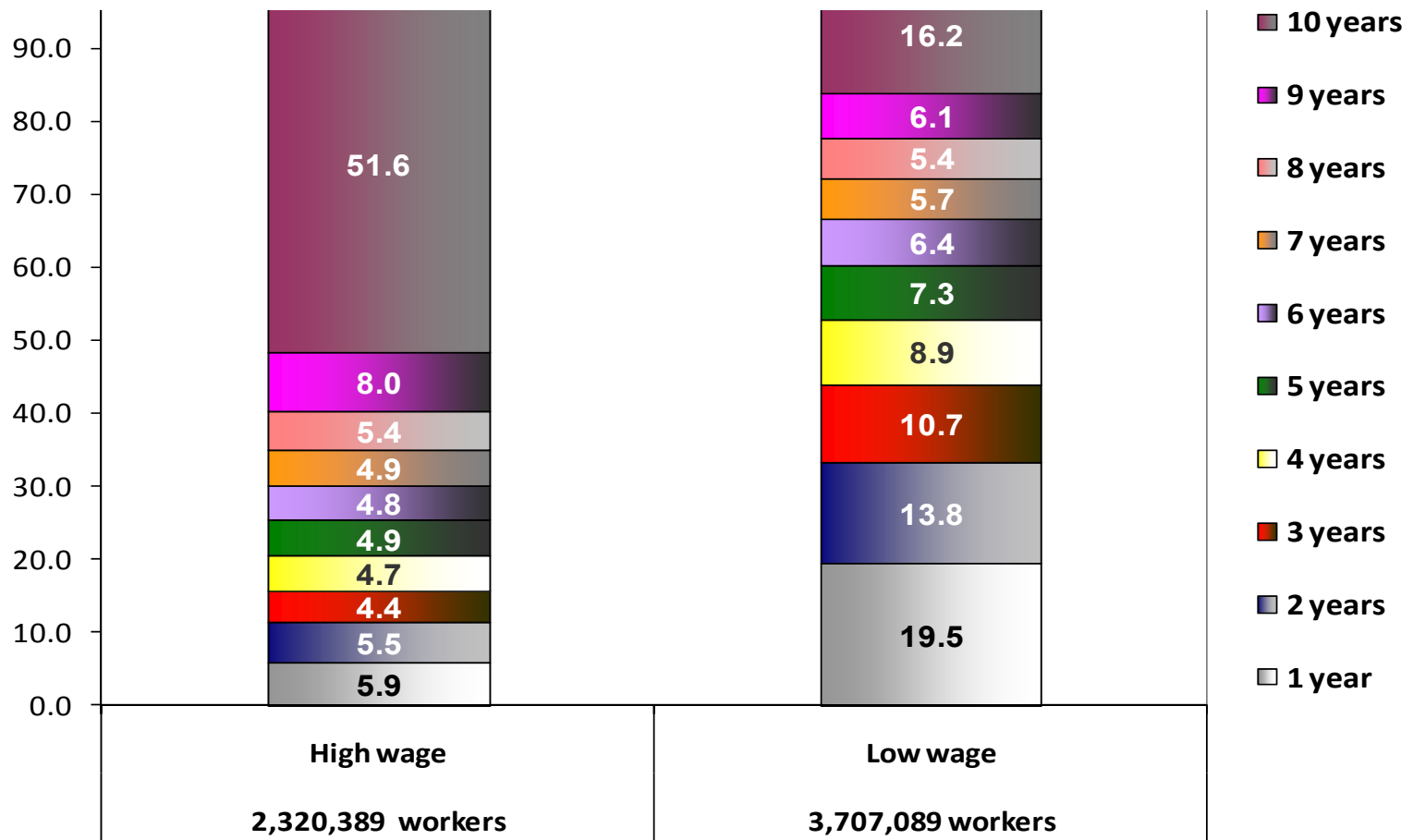
Some observations:

- **Informality is not defined by the size of firms** (many micro and small firms hiring salaried workers in Mexico are formal);
- **Informality is not equivalent to illegality** (not all informal workers in Mexico are salaried);*
- **Informality is not equivalent to non-salaried** (many informal workers in Mexico are salaried);
- **Informality is not equivalent to poor workers** (many informal workers in Mexico have high earnings, and some poor workers are formal).

(*Firms hiring salaried workers but not enrolling them in social security are **expressly violating the Law**; the illegal act is committed by the firm, not the worker.)

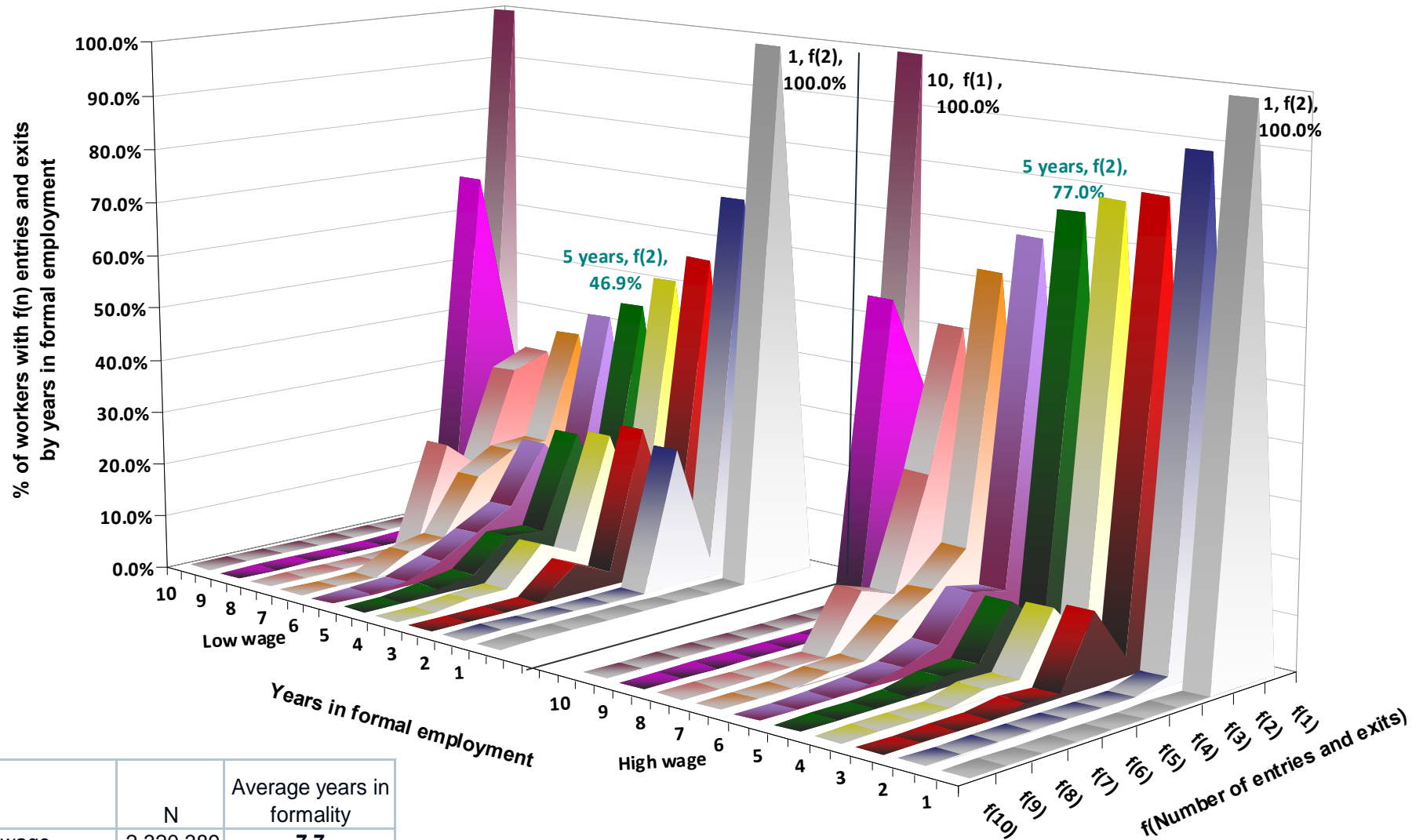
Workers Mobility in the Labor Market

1997 generation: average permanence during 10 years



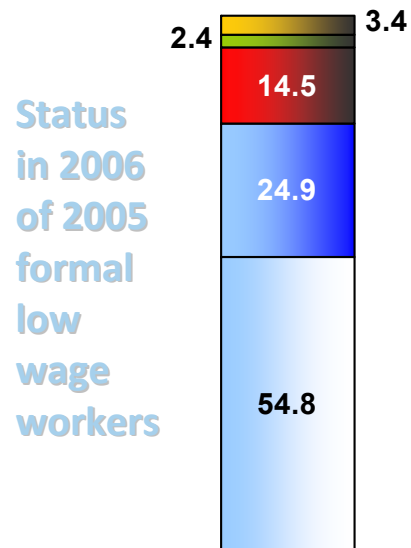
On average, high (**low**) wage workers who were enrolled in IMSS in 1997 have been in formality 77% (**49%**) of their time.

Distribution of workers by years in formal employment and frequency of entry and exit into formality, 1997-2006



	N	Average years in formality
High wage	2,320,389	7.7
Low wage	3,707,089	4.9

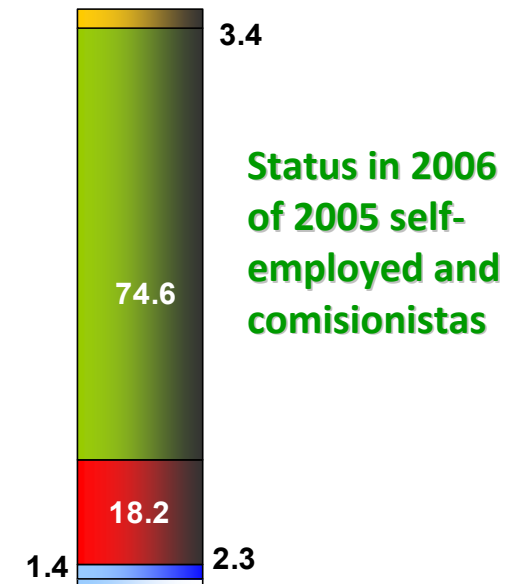
Employment surveys*: around 20% of all workers change status in one year



Status in 2006 of 2005 informal salaried workers



	2005	2006
Formal low wage	15.4	14.9
Formal high wage	19.2	21.0
Informal salaried	32.1	32.3
Informal self-employed	26.1	26.0
Open Unemployed	7.2	5.9
Total	100.0	100.0



Status in 2006 of 2005 openly unemployed



*Workers 16-65 who did not change location, and were continuously interviewed from 2005 II to 2006 II.

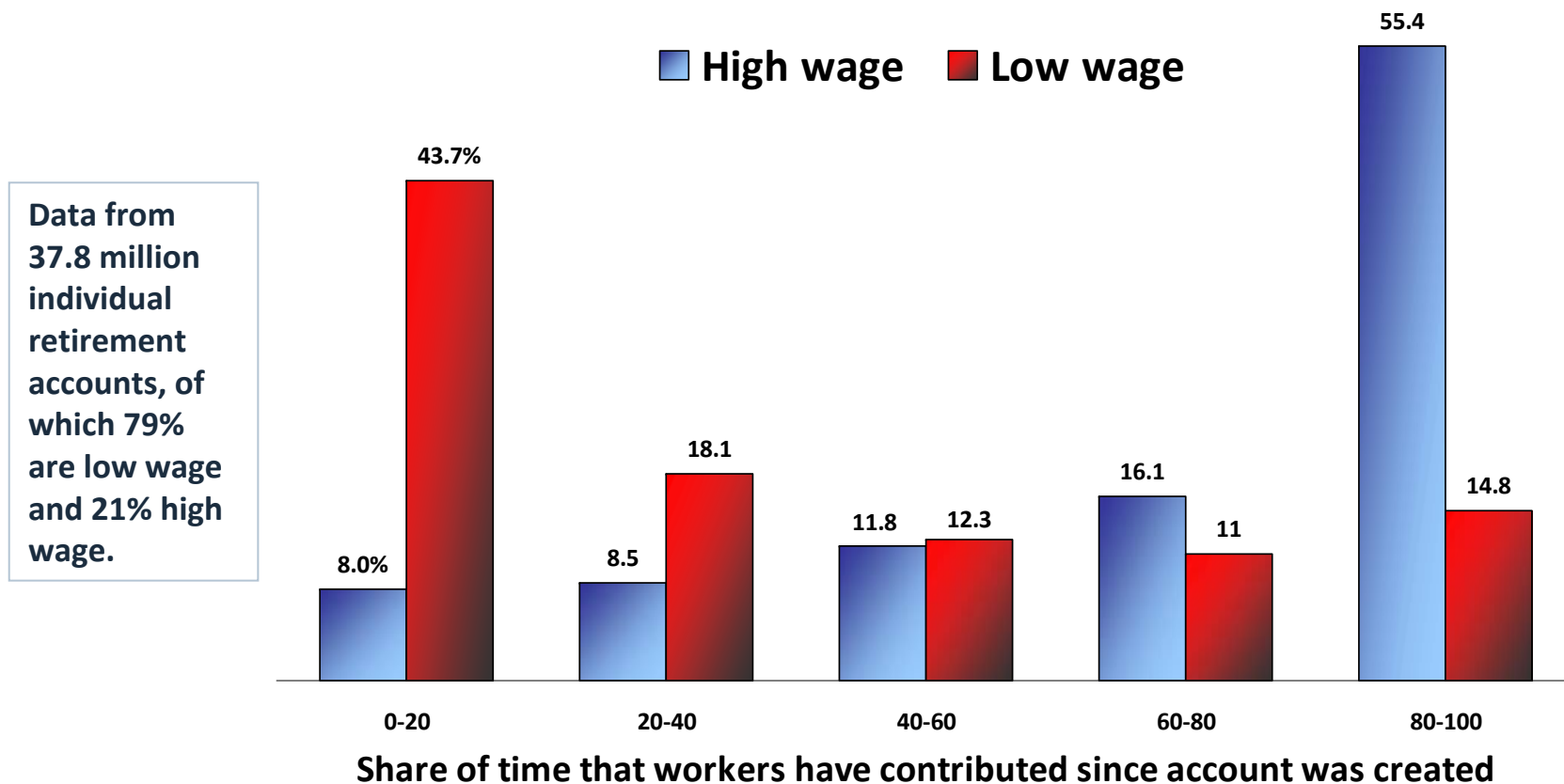
Implications for social policy

- Distinction between “formal worker” vs. “worker at present hired formally”. Most workers have spells of formal and informal employment.

[There is (almost) no such thing as a formal worker].

- Some firms hire formal and informal workers simultaneously.
- Only when workers are formal do they consume the bundle that the government wants (health, life and disability insurance, save for retirement, severance pay).
- Coverage against risks erratic and incomplete: when formal yes, when informal, partially (given unbundled nature of social protection programs).

An example from retirement pensions



The average contribution density in the 1997-2007 period was 45%. Replacement rates will be low, particularly for low wage workers. **Most low wage workers will not qualify for the guaranteed minimum pension (at least 25 years of contribution).**

Social Programs, Welfare and Productivity

Impact of social programs on firms and workers (minimum structure of the problem):

$$p^w \partial Q_f / \partial L_f - [w_f + T_f] = 0$$

$$p^w \partial Q_i / \partial L_i - w_i = 0$$

$$w_f + \beta_f T_f = w_i + \beta_i T_i + (\alpha)$$

$$L_f + L_i = L$$

Formal firms hiring salaried workers maximize profits

Informal firms hiring non-salaried workers and the self-employed maximize profits (to simplify I add both in a single demand)

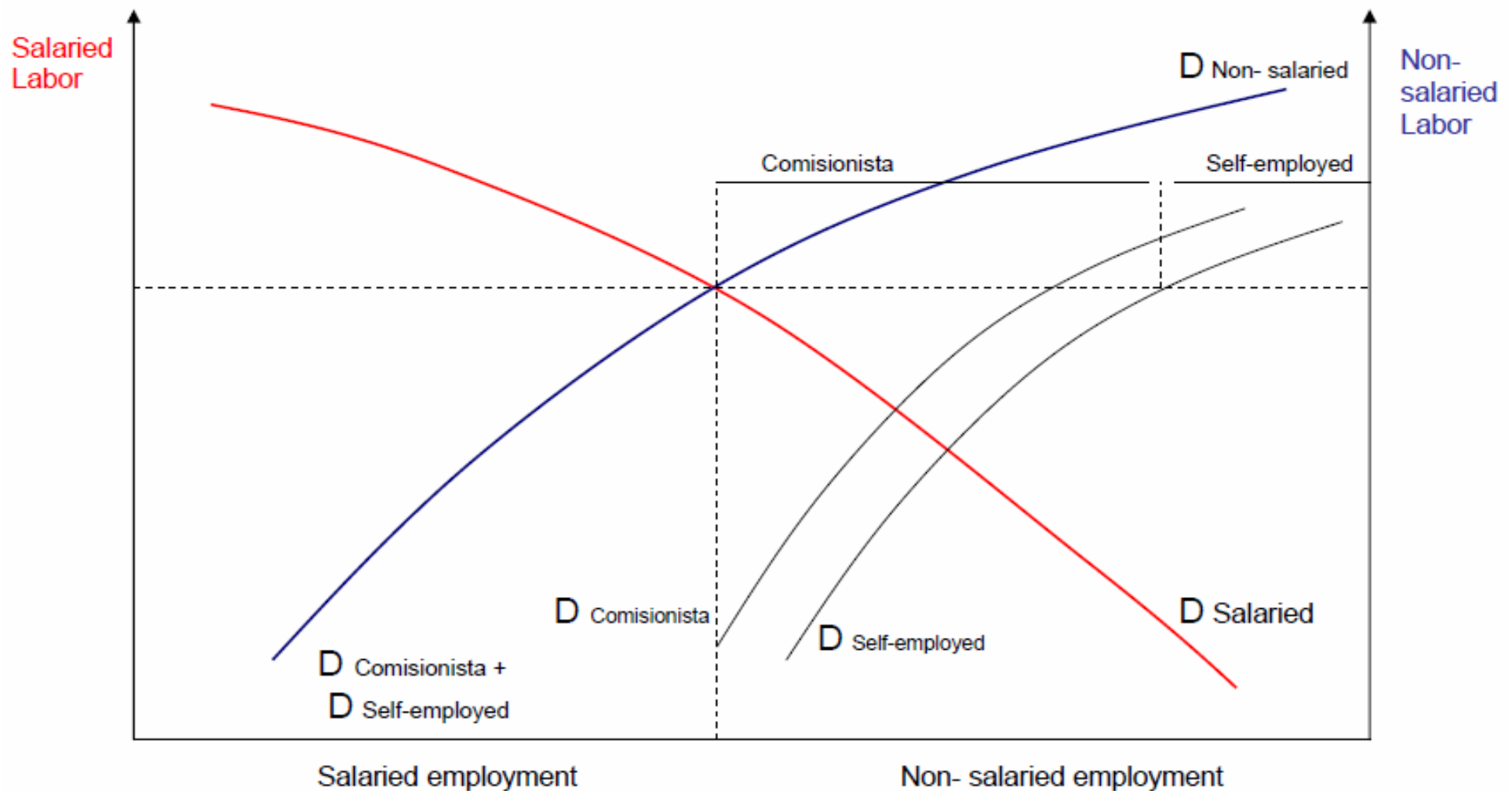
Workers search for jobs to maximize utility

All workers are employed

Initially I assume all behavior is legal (or perfect enforcement).

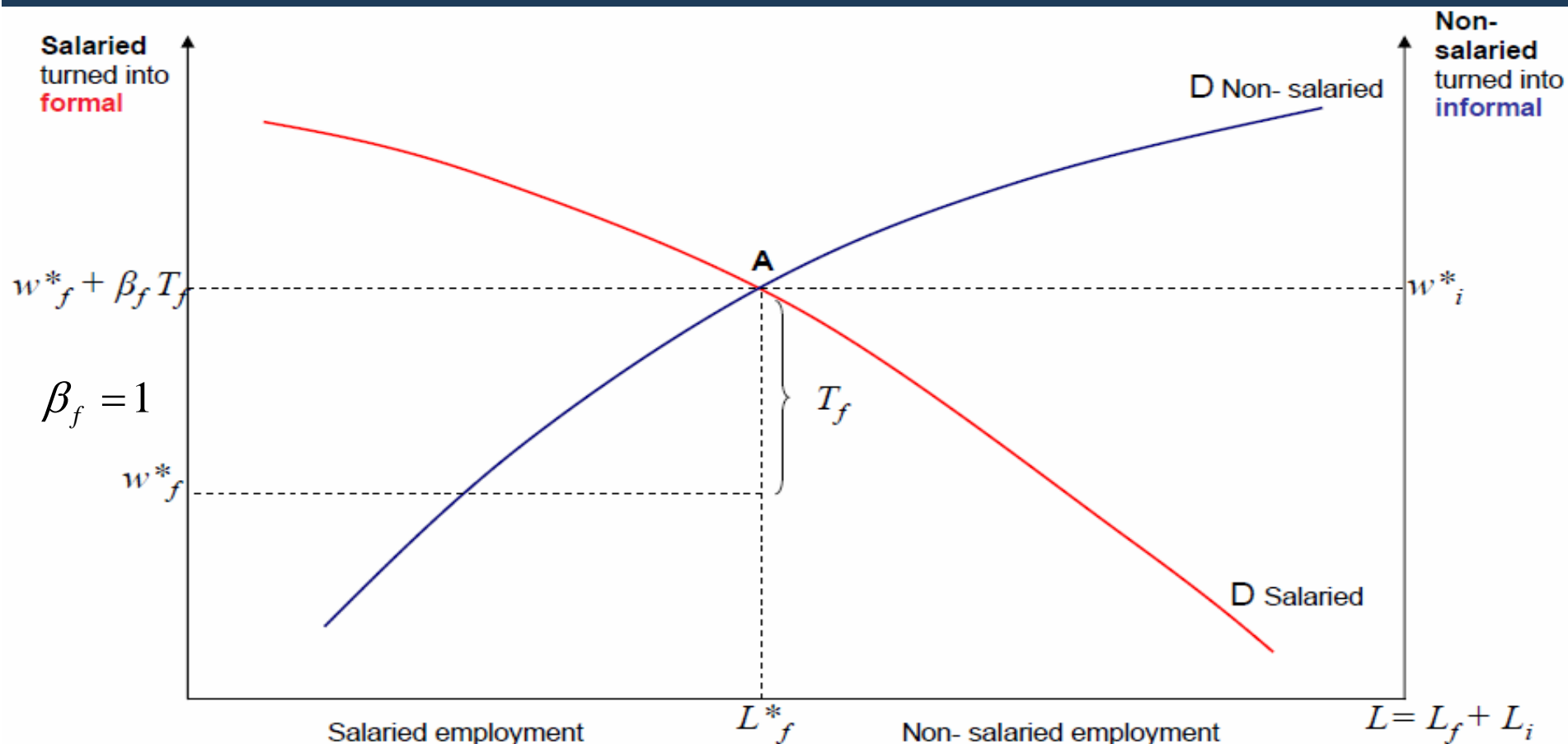
I explore solutions to $[L_f, L_i, w_f \& w_i]$ depending on values of $[T_f, T_i, \beta_i, \beta_f]$.

In the beginning.... ($T_f = 0$ and $T_i = 0$)



In the absence of social security regulations the distinction between salaried and non-salaried employment has no welfare or efficiency implications.

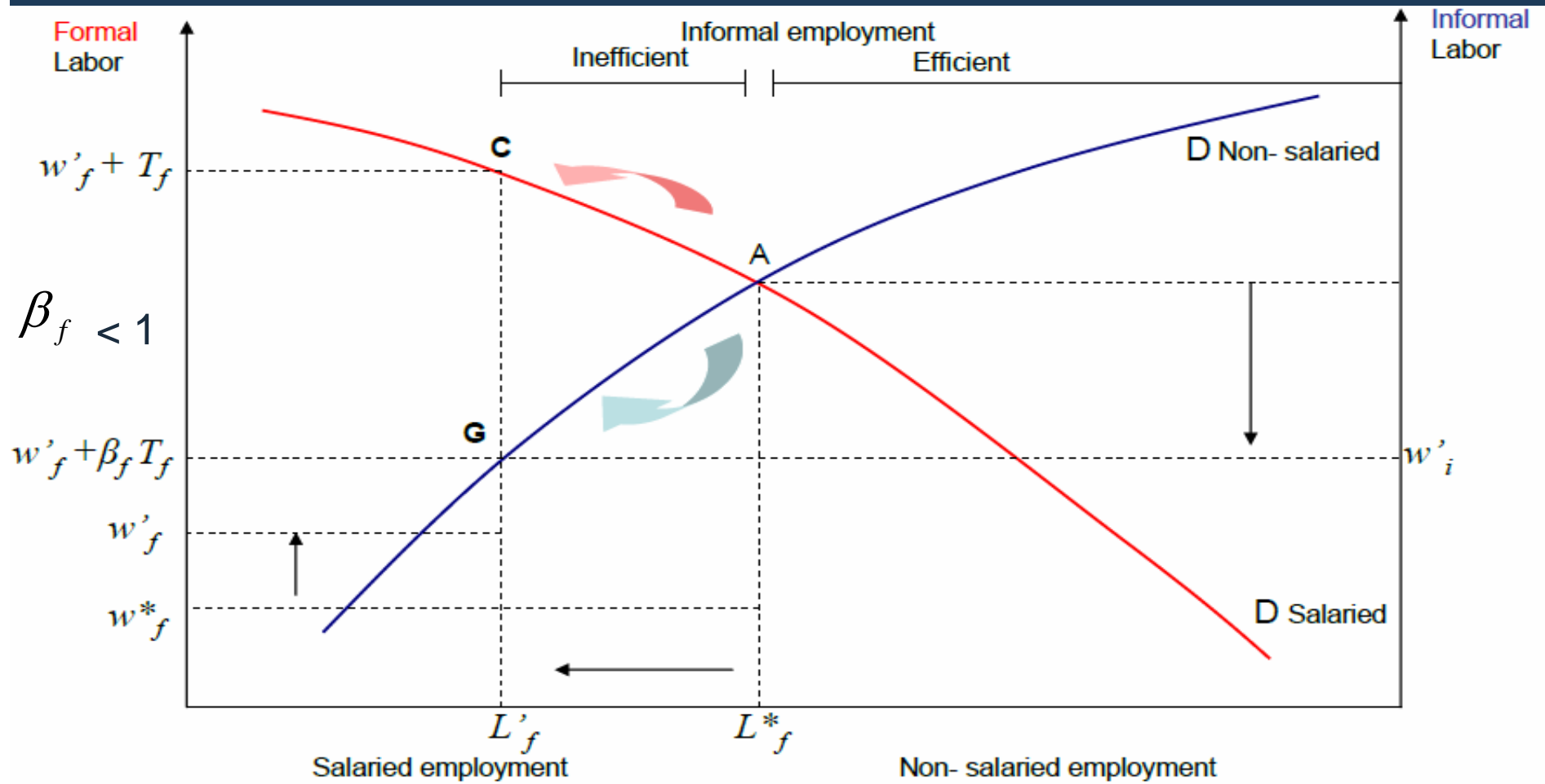
Social security is created ($T_f > 0$).... and fully valuedbut no social protection ($T_i = 0$). Formality and informality are “born”.



There is no impact in the labor market except in the form of payment to salaried workers. **The government's social goals are accomplished with L_f^* workers.** **Non-salaried workers are not covered against any risks. The expressions formal and informal workers have a precise meaning. Informal employment is efficient**

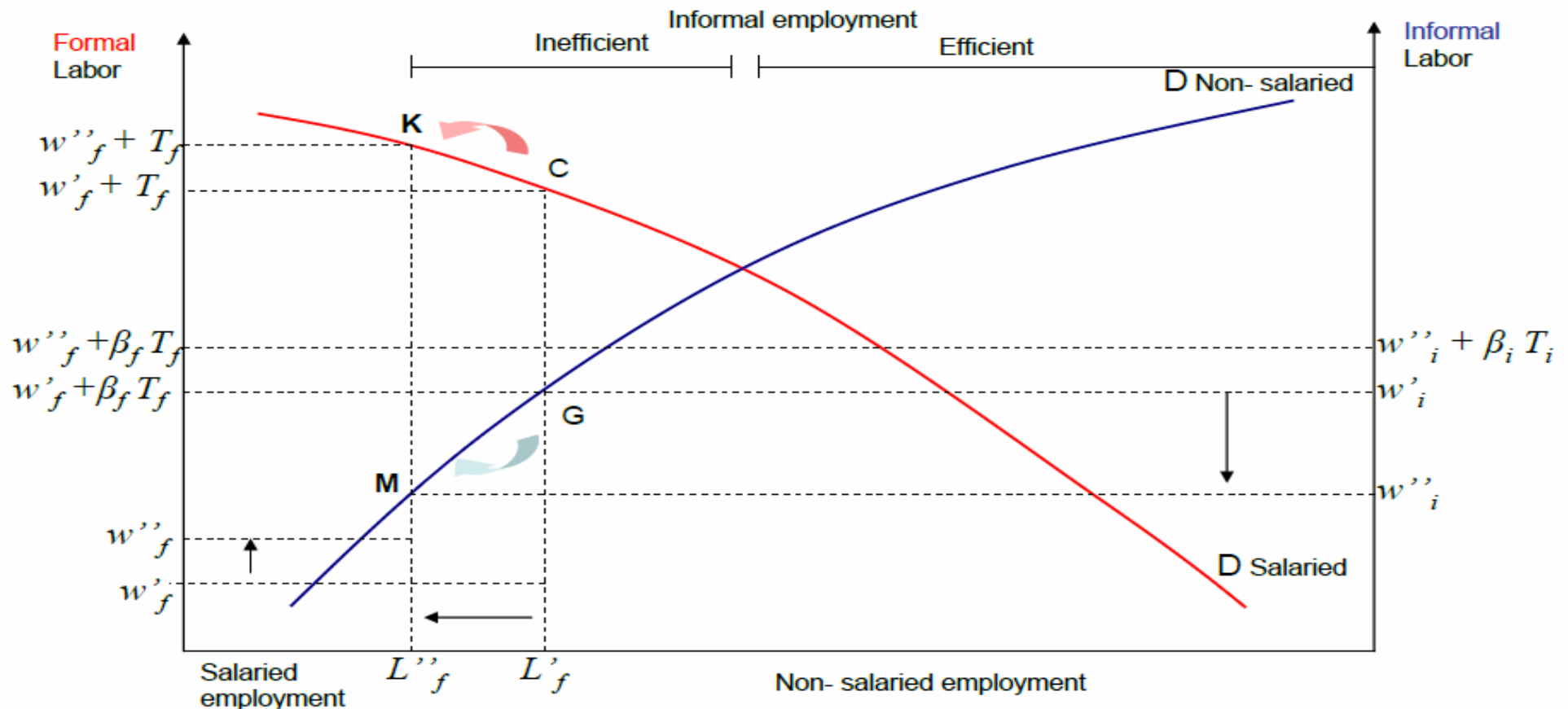
Next, social security does not work well.....

$$\beta_f < 1$$



When $\beta_f < 1$ there is a **tax on salaried labor**. Firms hiring salaried workers reduce employment. The government's social goals are accomplished with L'_f workers and not at all with $(L - L'_f)$ workers. **A component of informal employment is socially inefficient; average labor productivity falls.**

In parallel, the government introduces programs to protect informal workers..... ($T_i > 0$)



Social protection programs act like a **subsidy to informal employment**. However, now informal workers can voluntarily access unbundled social protection benefits, while fewer formal workers consume bundled social security benefits. **Impact of T_i on workers' utility is positive, on social welfare ambiguous and on productivity negative** Gap in MPI widens

Note that:

- Social protection programs **widen the gap** between the marginal product of formal and informal labor.

$$MPL_f - MPL_i = (w_f + T_f) - w_i = (1 - \beta_f)T_f + \beta_i T_i$$

- If one ignores the issue of who pays for them, **the utility of all workers is higher.**
- However, social protection programs have **contradictory effects** on the government's social objectives.

Illegal behavior: evasion of regulations on salaried labor

- When $\beta_f < 1$ workers and firms hiring salaried employees have incentives to evade the Law.
- Firms pay fines of $F > T_f$ if they are caught evading.
- Enforcement may be imperfect and there is a probability of being fined, $\lambda \in [0,1]$
- Evasion creates salaried workers without social security, L_{if} , receiving a wage w_{if} that compensates them for not receiving social security benefits.

Although the illegal act is committed by the firm, both firms and workers may benefit from evasion. As a result of it, not all salaried workers are formal. Illegality creates the need for a distinction between formal workers and salaried workers.

Minimum structure of the problem:

- Firms hiring salaried workers maximize profits **mixing L_f and L_{if}**

$$p^w \partial Q_f (L_f + L_{if}) / \partial L_f - [w_f + T_f] = 0$$

$$p^w \partial Q_f (L_f + L_{if}) / \partial L_{if} - [w_{if} + \lambda F + (\partial \lambda (L_{if}) / \partial L_{if}) \cdot F \cdot L_{if}] = 0$$

$$\lambda = \lambda(L_{if}); \lambda' > 0$$

- Firms engaging with non-salaried workers maximize profits $p^w \partial Q_i / \partial L_i - w_i = 0$
- Workers maximize utility and all are employed

$$(w_i + \beta_i T_i) = (w_{if} + \beta_i T_i)$$

$$(w_{if} + \beta_i T_i) = (w_f + \beta_f T_f)$$

informal employment

$$L_i + L_{if} + L_f = L$$

salaried employment

Note: The equilibrium probability of being fined, λ^* , is determined endogenously along with wage rates $[w_f^*, w_i^*, w_{if}^*]$ and employment levels $[L_f^*, L_i^*, L_{if}^*]$.

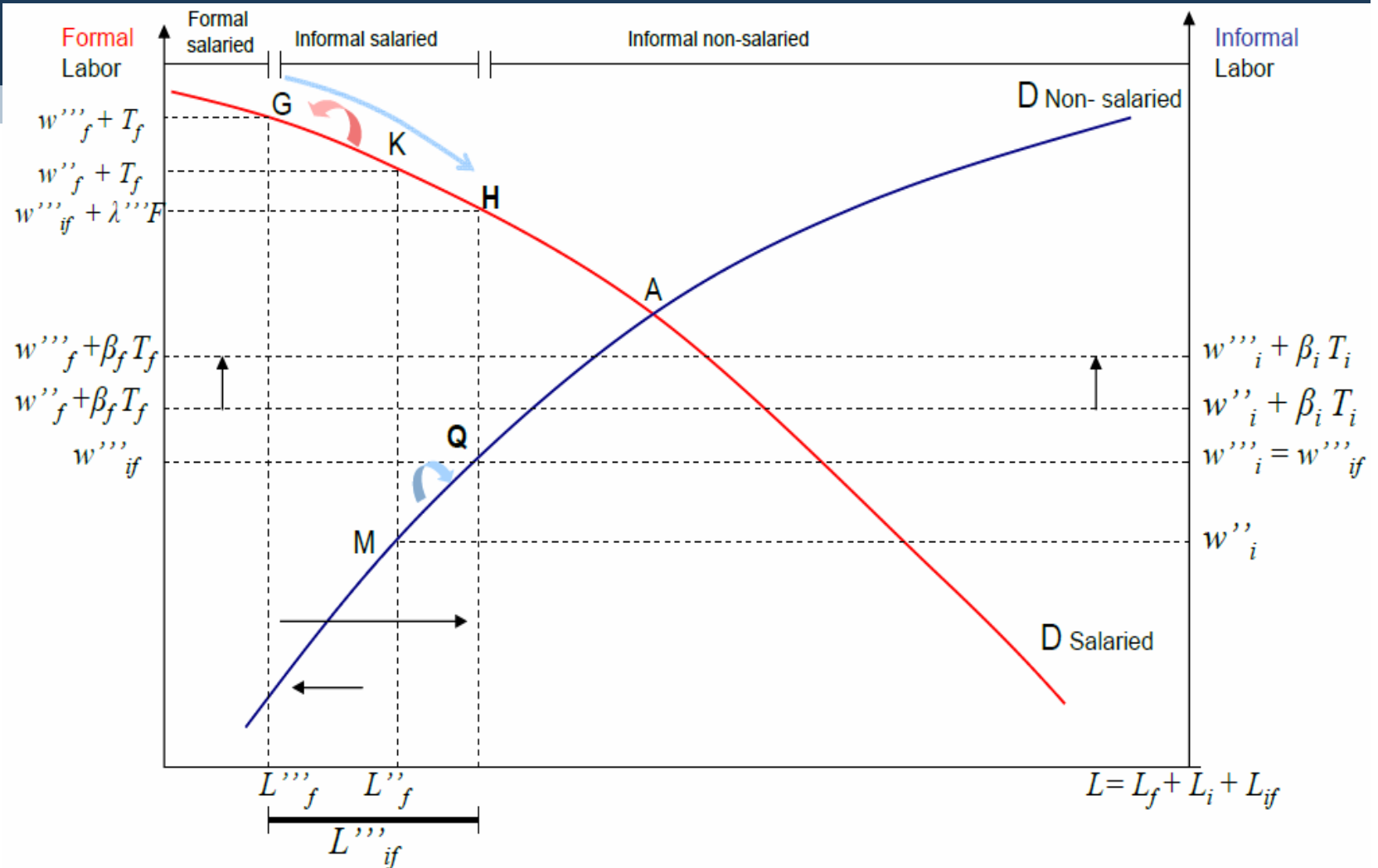
The labor market with evasion

K = formal employment without evasion,

G = formal employment with evasion

H = salaried employment with evasion

L_{if} salaried workers are hired illegally.



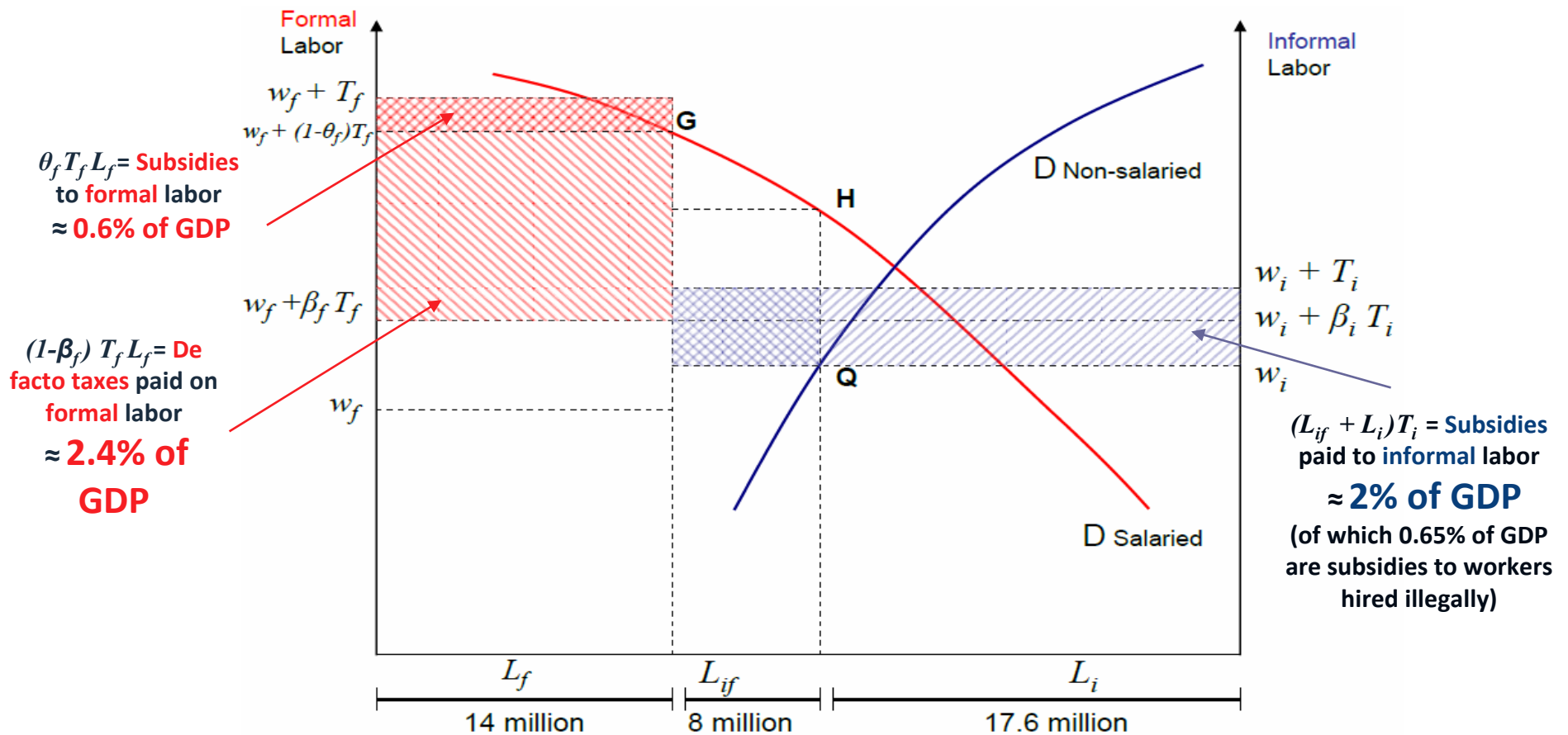
Evasion increases salaried employment (good for labor productivity!) but higher informal employment defeats the government's social objectives. Worker's utility is higher with evasion. Social security contributions fall. Since firms cheat, taxes are also lower. Spending on social protection programs is higher.

In sum, social policy induces informality for four reasons:

- Because non-salaried workers are excluded from social security;
- Because social security acts like a tax on salaried labor;
- Because social protection acts like a subsidy to non-salaried labor;
- Because firms and workers in salaried relations engage in illegal behavior generating illegal (informal) salaried labor.

Informality has other causes: tax regulations, costs of registration and operation. But social programs matter.

Observed labor allocations and wage rates in Mexico reflect large tax-cum-subsidies associated with social policy



This is the distribution of Mexico's non-public labor force in 2006.

Policy needs an integrated view of social programs

	T_f	β_f	θ_f	T_i	β_i
L_f	-	+	+	-	-
L_i	+	-	-	+	+
L_{if}	+	-	-	+	+
w_f	+	-	-	+	+
w_i	-	+	+	-	-
w_{if}	-	+	+	-	-

Note that: $\partial TFP / \partial T_i < 0$ but $\partial U_f / \partial T_i = \partial U_i / \partial T_i > 0$

so that **the government is caught in a dilemma.**

This is a **BIG** problem.

What do we know about the impact of T_i on $(L_i + L_{if})$?

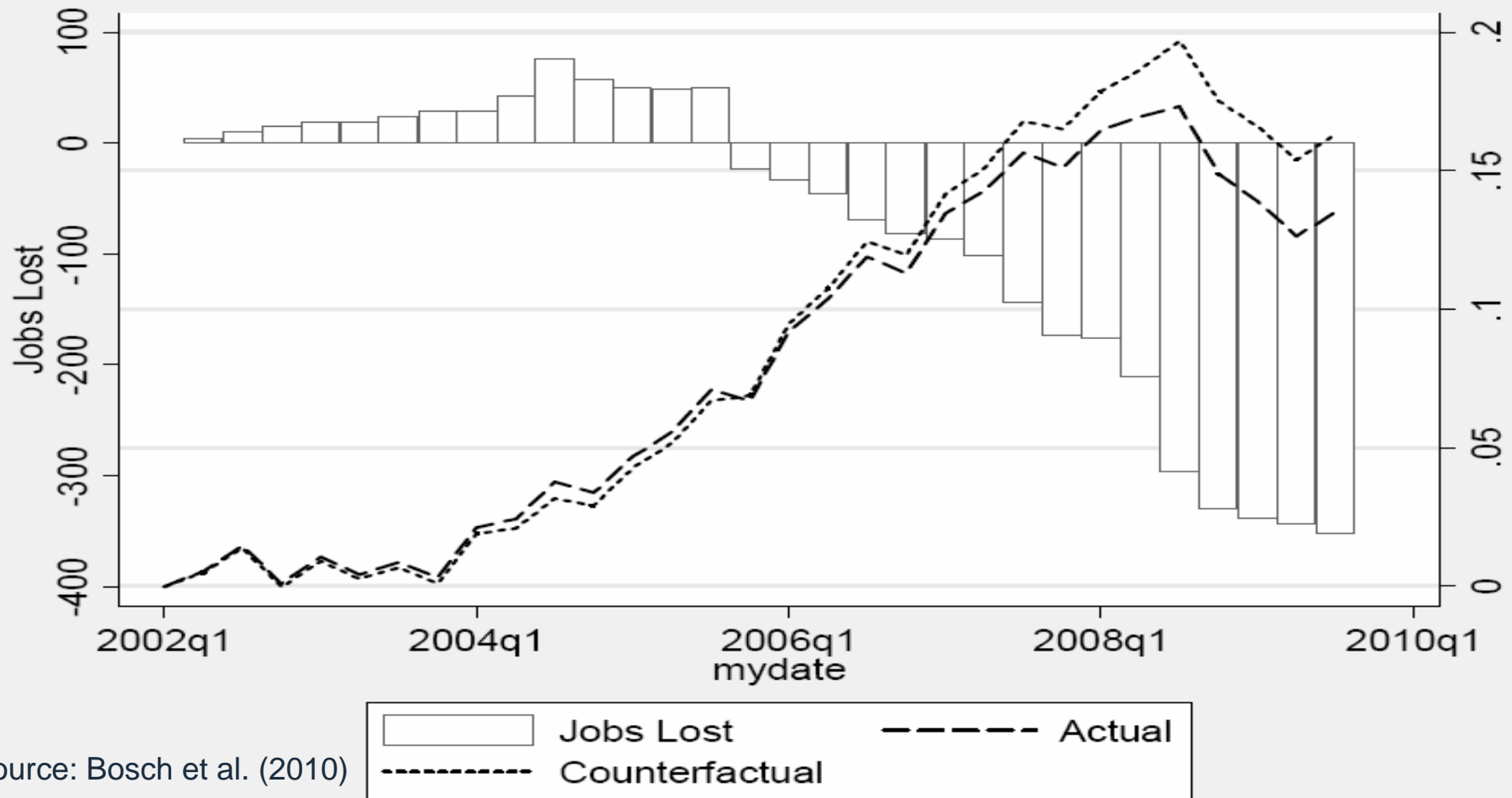
Juarez (2008) finds that a free health insurance program for women without social security coverage in Mexico City increases the probability of informal employment by women by

Bosch and (2010) find a positive impact of “Seguro Popular” on informal employment in Mexico. Over the period 200x to 200x they find that formal employment was xx% lower as a result of this program. Effects are concentrated on younger workers, and on increased illegal employment by smaller firms

Galiani and Gertler (2010) find that a non-contributory pension program increases informal employment in Mexico, with effects concentrated on older workers.

But note that T_i has been positive for decades!

There is evidence of negative impacts on formal employment of federal social protection programs

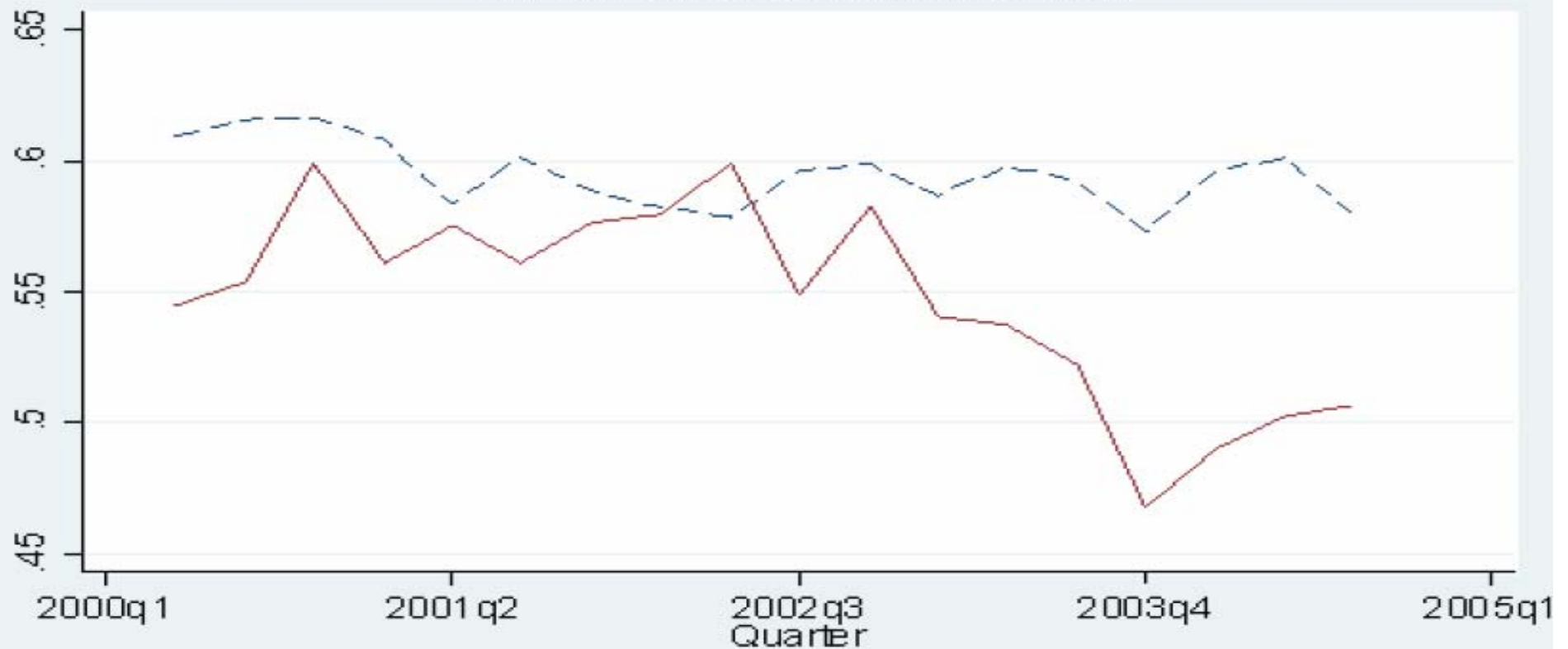


Preliminary results show that between 2004 & 2009 “Seguro Popular” has converted around 380,000 formal jobs into informal.

And state-level programs

Impact of the Federal District Health Program for Women (PSMMG)

Fraction of Female Salaried Workers Covered by Social Security
With at Most High School Education



Source: Juárez (2008).

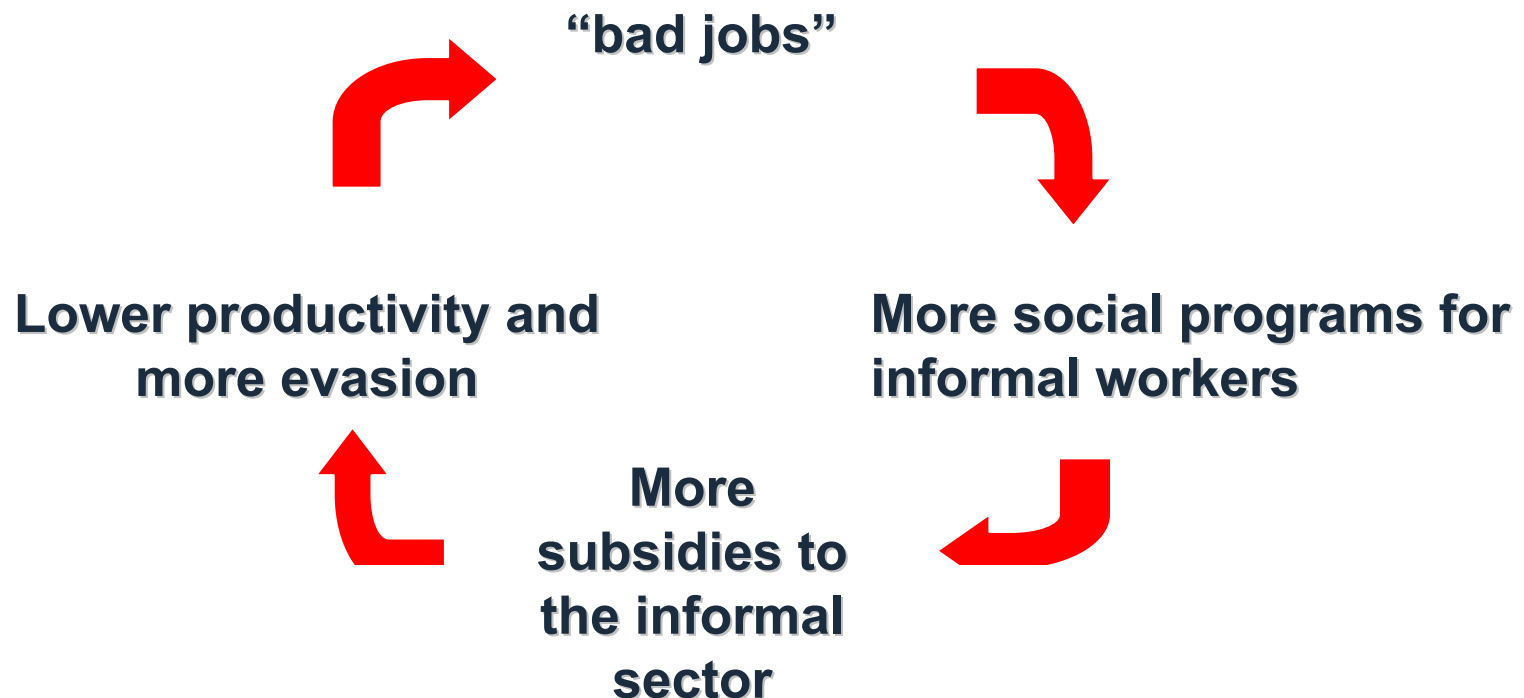


Informality is bad for growth....and for workers

- In Levy (2008) I show that when $\beta_f < 1$ and $T_i > 0$, rates of return on investments in informal firms increase, and that this results in a **suboptimal allocation of capital** and a lower rate of growth of GDP.
- **Economies of scale and scope may be under-exploited**. Maloney (2006) finds that increases in formality increase firm's survival rates and brings firms' closer to their optimal size. Lopez-Acevedo (2006) finds that smaller firms are between one fifth and one sixth less likely to invest in **workers' training and to adopt new technologies**.
- Transaction costs in the sense of Coase may also be higher because of **sub-optimal vertical integration**.
- Many firms in the border of formality and informality have high failure rates, or change labor contracts continuously. This partly explains the high levels of formal-informal mobility of workers. Precarious or unstable jobs with low wages result from precarious and unstable firms.

Mexico might be caught in a vicious circle of informality and low productivity.

- Many factors interact, including fiscal regulations and credit problems. But social policy stands out because it is the equivalent of a tax on size and a subsidy to dispersion.

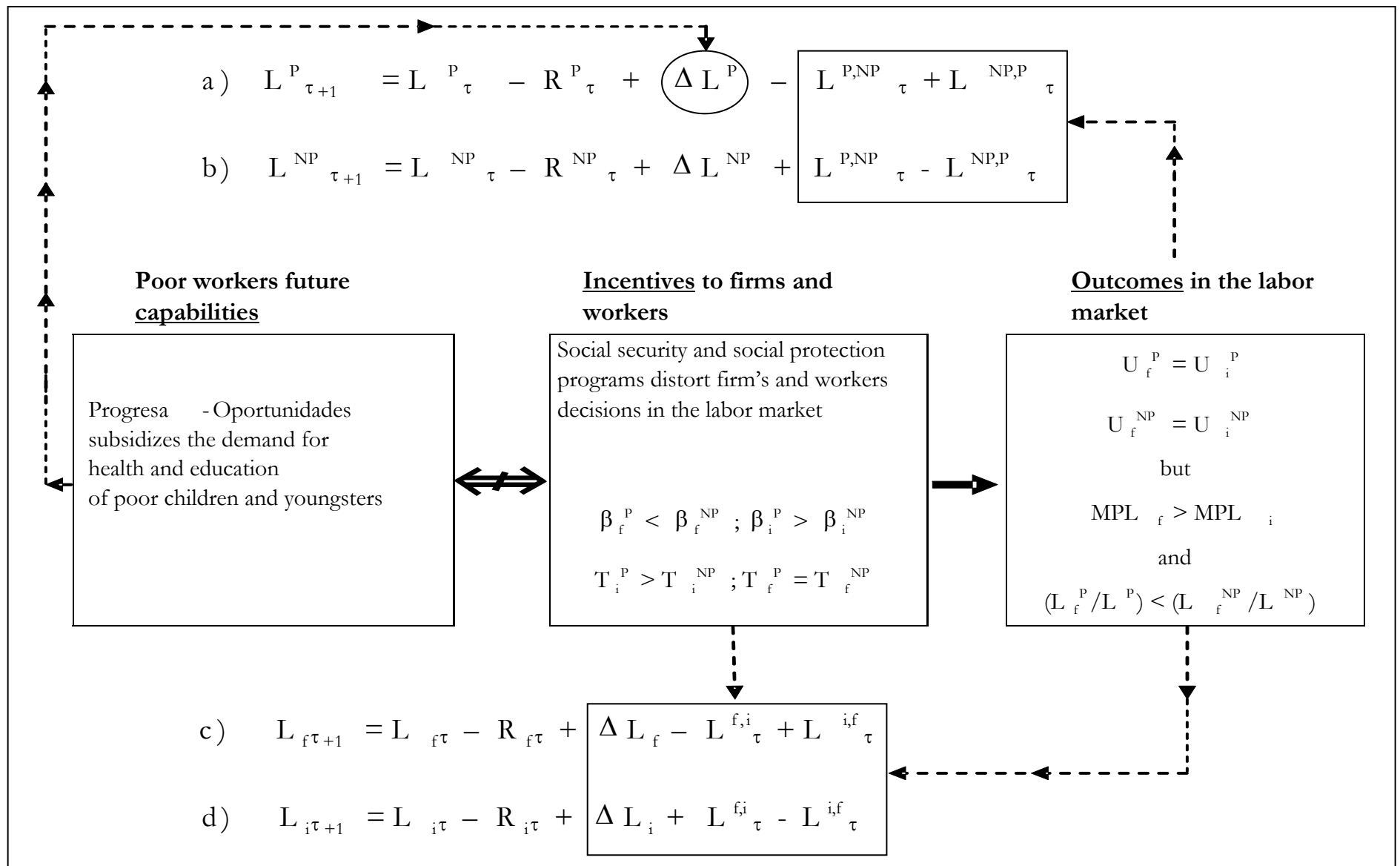


Informality and Poverty

Informality and poverty

- This line of work is relevant to the “post CCT” discussion.
- In Levy (2008) I argue that $\beta_f^P < \beta_f^{NP}$ and $\beta_i^P > \beta_i^{NP}$ and show that this helps to explain this puzzle:
 - why, if most poor workers have no assets other than their labor, they end up in informal jobs, when the expectation would be that they should have formal jobs?

There is an incentive-compatibility problem between Progresa, on one hand, and social protection and social security programs, on the other.



Progresa cannot fix the problems created by the formal-informal dichotomy. Raising benefits in Progresa indefinitely cannot substitute for a job with higher labor productivity. **And raising T_i to increase the welfare of poor workers makes the productivity problem worse.**

Concluding Remarks

1. Need more accuracy in the expressions “formal” , “informal” , “social safety nets” , “social protection” and “social programs”.
2. Need to distinguish between programs that provide insurance to workers regardless of income levels, but based on labor status (salaried vs. non-salaried and social security vs. social protection), on one hand; and programs that provide income transfers regardless of labor status, but based on income levels (with or w/o associated investments in HK).
3. Need to understand better the incentives of each, and of their interaction. This involves analysis of the “architecture” of social policy. Impact evaluations of programs do not pick this up. Need to evaluate how various programs interact, in addition to individual programs.

4. Social programs can have unintended perverse incentives. I have focused on formal – informal choices of firms and workers. This is critical, but attention is also needed to labor – leisure choices. I think this partly explains the “productivity puzzle in LAC” [IDB (2010)].
5. Serious concerns about the direction of social policy. These issues are critical for the design of economic and social policies in LA.
6. The fiscal dimensions of social policy need a lot more attention. To escape the dilemmas posed by the formal-informal dichotomy, I propose universal social rights financed with consumption taxes, delinking (by-and-large, although not completely) social insurance from labor status. (A major rethinking of some aspects of social and fiscal policy.)

THANK YOU!