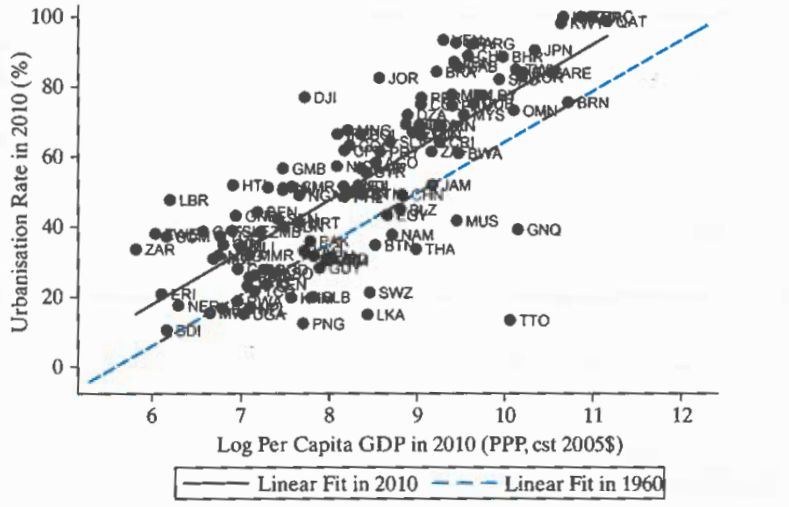
Urban Issues, Rural – Urban Migration, Informal Sector, Income diversification

Richer countries have a higher share of their population living in urban areas.

There is thus, in cross section, a positive relationship between urbanization and per capita income.

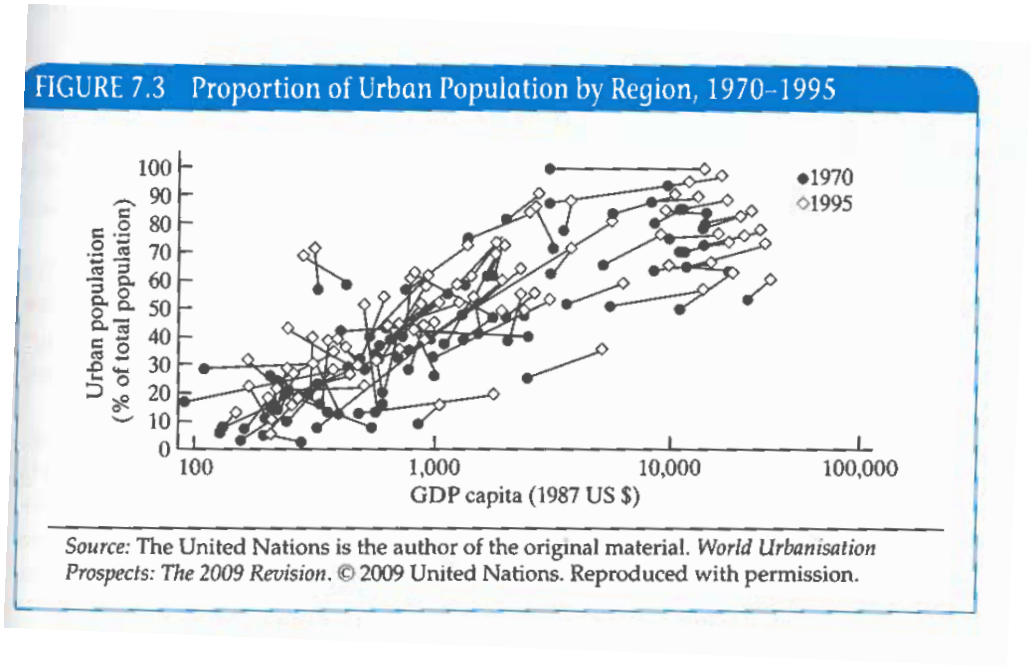
FIGURE 7.2 Relationship Between Urbanisation and Per Capita GDP, 2010, with Comparison to Relationship in 1960



Sources: Christiaensen, Luc, Jedwab, Remi, Lanjouw, Peter and Seold, Harris (2014), 'Urbanisation and poverty reduction,' draft working paper (special thanks to Remi Jedwab). Data sources: Maddison (2008), United Nations (2011), and World Bank (2013).
Note: This figure shows the relationship between the urbanisation rate and the log per capita of GDP, in 2,005 PPP, for 119 developing countries in 2010. The solid line is a linear fit for the data in 2010. The dashed line is a linear fit for the data in 1960 (the scatter plot is not shown for 1960).

In addition, urbanization is occurring in just about every country.

% of Total Population in Urban Areas



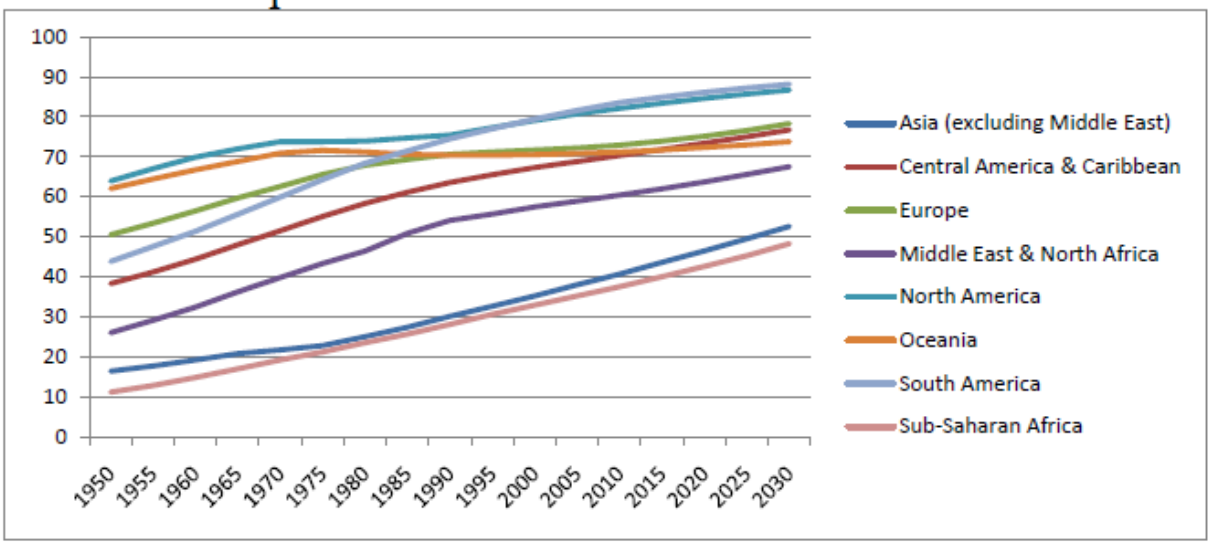
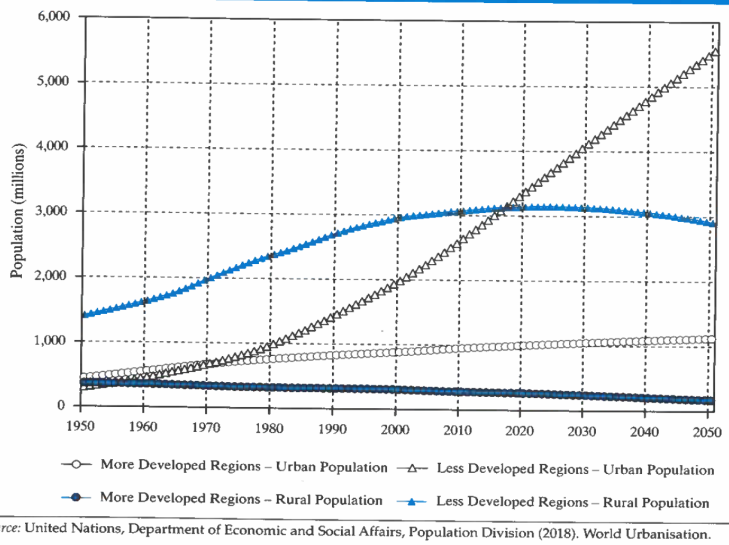


FIGURE 7.6 Estimated and Projected Urban and Rural Population of the More- and Less-Developed Regions, 1950–2050



Source: United Nations, Department of Economic and Social Affairs, Population Division (2018). World Urbanisation.

Growth in areas turning rural to urban.

Births in urban areas.

Rural to urban migration.

TABLE 7.2 The World's Largest Cities, 1995 and 2015

City	1995 Population Rank	1995 Population Millions of Inhabitants	Average Annual Growth Rate 1990–1995 (%)	2015 Population[a] Rank	2015 Population[a] Millions of Inhabitants
Tokyo, Japan	1	26.8	1.41	1	28.7
São Paulo, Brazil	2	16.4	2.01	6	20.8
New York, United States	3	16.3	0.34	11	17.6
Mexico City, Mexico	4	15.6	0.73	10	18.8
Bombay, India	5	15.1	4.22	2	27.4
Shanghai, China	6	15.1	2.29	4	23.4
Los Angeles, United States	7	12.4	1.60	—	—
Beijing, China	8	12.4	2.57	8	19.4
Calcutta, India	9	11.7	1.67	12	17.6
Seoul, South Korea	10	11.6	1.95	—	—
Jakarta, Indonesia	11	11.5	4.35	5	21.2
Buenos Aires, Argentina	12	11.0	0.68	—	—
Tianjin, China	13	10.7	2.88	14	17.0
Osaka, Japan	14	10.6	0.23	—	—
Lagos, Nigeria	15	10.3	5.68	3	24.4
Karachi, Pakistan	—	—	—	7	20.6
Dhaka, Bangladesh	—	—	—	9	19.0
Delhi, India	—	—	—	13	17.1
Manila, Philippines	—	—	—	15	14.7

Sources: World Resources Institute, *World Resources, 1996–97:* The Urban Environment (New York: Oxford University Press, 1996), tab. 1.1; United Nations, *World Urbanization Prospects: The 1994 Revision* (New York: United Nations, 1995), tab. 1.
[a]Projections made in 1995.

TABLE 8.4 Importance of Rural-Urban Migration as a Source of Urban Population Growth in Selected Developing Countries

Country	Annual Urban Growth (%)	Share of Growth Due to Migration (%)
Argentina	2.0	35
Brazil	4.5	36
Colombia	4.9	43
India	3.8	45
Indonesia	4.7	49
Nigeria	7.0	64
Philippines	4.8	42
Sri Lanka	4.3	61
Tanzania	7.5	64
Thailand	5.3	45

Source: R. Newland, *City Limits: Emerging Constraints on Urban Growth*, Worldwatch Institute, Worldwatch Paper No. 38. Copyright © 1980, www.worldwatch.org. Reprinted with permission.

Does urbanization lead to growth?

Does growth lead to urbanization?

What are the economic benefits of locating a firm in the city?

Some of this goes back to our endogenous growth theory concepts:

Agglomeration economies – cost advantages to producers and consumers when others choose to locate in the same area as you choose to locate in.

Urbanization economies – general benefits of growth in a concentrated geographical region.

- Transport issues.
- Access to consumers.
- More sophisticated and specialized economy.
- More workers looking for jobs.
- Amenities: More stuff to do, better media,…

Localization economies – effects captured by particular sectors of the economy as they grow in a given area.

- Backward linkage (again) – When a firm buys a good from another firm to use as an input
- Forward linkage (again)- When a firm sells a good to another firm.
- Knowledge spillovers. Learn by watching competitors.
- Scale issues – contract out work to other firms if an order is too big for the given firm.
- Consumer behavior – locate in the area where consumers are used to going to buy the kind of product you produce.
- Collective action is possible, since there is likely to be a harmony of interest on some issues.

Krugman pointed out that under an import substitution industrialization strategy, focus on the domestic economy can lead to concentration in a single city, as producers want to be near the largest number of consumers to lower transport costs.

Border points don't grow up to take advantage of cross border trade.

What are the disadvantages of locating a firm in the city?

- Congestion costs due to high population density and infrastructure limits.
- Infrastructure may become so strained that services become better outside of the city.
- Real estate costs are higher.

How did cities come to be located where they are?

Many in the developing countries arose because of transportation routes created during the colonial era and the nature of the colonial economy.

"All roads lead to Rome" transport legacy.

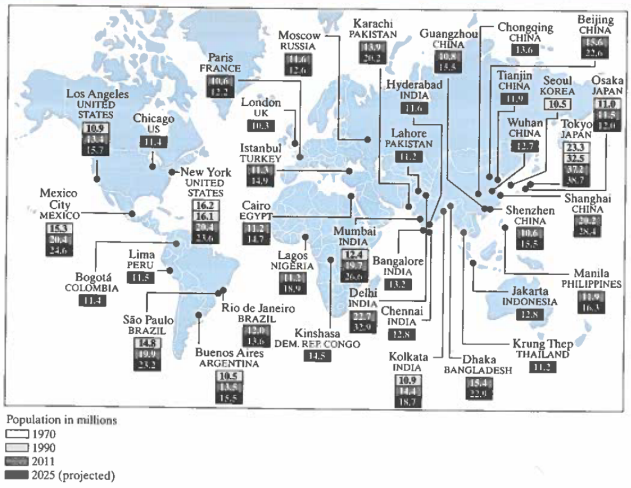
In many cases, you can't go from smaller city to smaller city without going through the capital.

"Urban Giantism" The largest city in developing countries holds a very large share of the national population. Table 7.1, figure 7.4.
New York, 6%
Toronto, 14%
Mexico City, Lima ~ 20%
Buenos Aries, Santiago ~33%
Montevideo, ~ 40%

A different aspect of this urban giantism is that there is often quite a size gap between the largest city and the second largest city.

Toronto: Montreal, New York: LA ratio is 1.3
London and Paris 7 to next biggest city.
Buenos Aires 9.7
Santiago 14.3
Bangkok around 20.

FIGURE 7.4 Megacities: Cities with 10 Million or More Inhabitants



Source: Data drawn from United Nations Population Division, *World Urbanisation Prospects: The 2011 Revision* (New York: United Nations, 2011), at http://esa.un.org/unup/pdf/WUP2011_Highlights.pdf

TABLE 8.5 Largest and Second Largest Cities in Selected Countries[a]

Country	Largest City Population	Second City Population	Ratio
Canada	Toronto, 4.3	Montreal, 3.3	1.3
United States	New York, 19.7	Los Angeles, 15.3	1.3
Argentina	Buenos Aires, 10.7	Rosario, 1.1	9.7
Brazil	São Paulo, 9.8	Rio de Janeiro, 5.5	1.8
Chile	Santiago, 4.3	Concepcion, .3	14.3
Mexico	Mexico City, 15.0	Guadalajara, 2.9	5.2
Peru	Lima, 6.4	Arequipa, .6	10.7

Population Data Source: UN demography webpage, http://www.un.org/Depts/unsd/demog/city.htm.

[a]Populations are given in millions.

This can reflect a "First city bias". The country's largest city receives a disproportionately large share of the public investment and incentives for private investment in relation to the rest of the economy.

Politics of the matter.
Unstable countries tend to have higher urban concentrations.
To stay in power, the government gives benefits to the urban dwellers that in turn attract more migrants from the rural area.

Subsidized rice, low meat prices, parades, evangelical preachers in the parks, more varied and interesting media,…
"Bread and circuses"
Share of the population in the urban area by type:

Stable Democracies Urban Concentration= 23%	Stable Dictatorships Urban Concentration = 30%
Unstable Democracies Urban Concentration = 35%	Unstable Dictatorships Urban Concentration = 37%

Ades and Glaeser argue that to stay in power, throw money (bread and circuses) at the urban population to keep them from revolt. However, this will draw further population inflows.

Lobbying or plain corruption. Locate where the political decisions are made, since economic benefits are allocated by government.

Further exacerbated by the fact that the first city is often the capital – keep those who can get to you fastest happy.

Rural-Urban migration.

Why do people move from one area to another?

Recall the Lewis model, and moving people from subsistence agriculture to manufacturing. This can apply here if we add a spatial component to the story.

In the Lewis model, people moved to the manufacturing sector since the wage was higher there than in the agricultural sector.

But what about when there is urban unemployment?

Why do they keep coming?

People move in response to expected income. Migrants consider the average wage prevailing in the rural and urban sector, and factor in the probability of finding a job at the prevailing wage.

If I stay home, I am sure to get \$1 per day from my farm.

If I move to Gotham, I think there is a 10% chance I will get a job that pays \$5 per day and a 90% chance I will not find a job and get no income.

My expected benefits would be in favor of staying and not moving to Gotham.
$E[B_{move}]=(.10)*\$5+(.90)*\$0=\$0.50$.
$E[B_{stay}]=(1.00)*\$1=\$1$.

If I move to Springfield, I think there is a 40% chance of a job that pays \$5 per day and a 60% chance I will not find a job and get no income.

My expected benefits would be in favor of moving to Springfield.
$E[B_{move}]=(.40)*\$5+(.60)*\$0=\$2.00$.
$E[B_{stay}]=(1.00)*\$1=\$1$.

More complicated presentations of this idea add in search costs, the time element, the migration costs, uncertainty about rural income,… Present value calculation of net benefits versus net costs.

This model predicts that rural-urban expected wage differentials factor into the decision, rather than simply rural-urban wage differential.

This means you can have continuing migration to urban areas in spite of high unemployment rates.

1) Migration responds to a consideration of benefits versus costs.
2) Decision is based on expected rather than actual wage differentials.
3) The urban employment rate increasing increases the benefits of migration.
4) Migration rates can be positive in spite of unemployment.

What does this tell us?

The imbalance in wages between rural and urban areas should be addressed by both increasing the returns in rural areas and reducing the benefits urban workers receive.

Wage subsidies can be counterproductive.

Integrated rural development can be critical in reducing urban unemployment.

Urban job creation alone will not help, and can in fact make things worse.

Education investments may serve as a signaling device in such a setting leading to inefficient allocation of scarce educational resources.

- Trying to influence the probability of landing the job rather than developing a set of skills needed for the job.

The informal sector.

The unorganized, unregulated, unregistered sector of the economy. Migrants create their own work when they get to the city. Hawking, letter writing, barbers, shoe shiners…

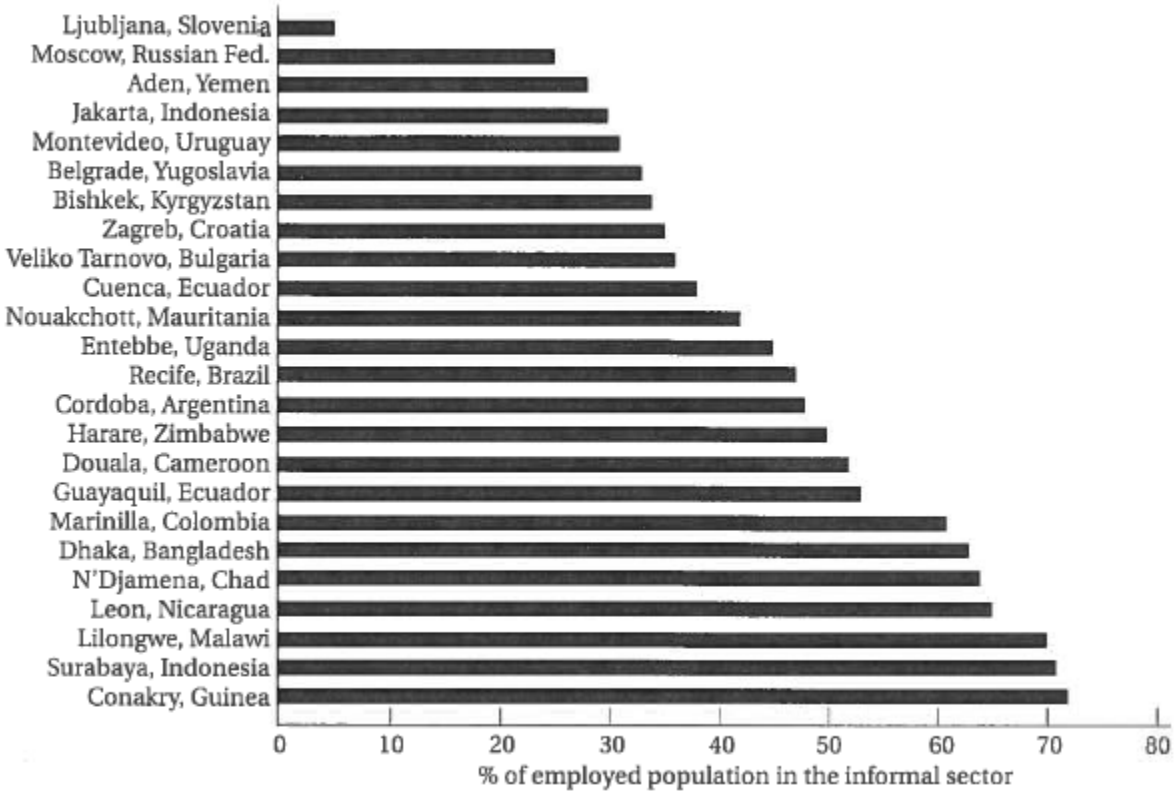
This often can account for the majority of the labor force.

TABLE 8.6 Estimated Share of the Urban Labor Force in the Informal Sector in Selected Developing Countries

Area	Share (%)
Africa	
Ghana	60–70
Ivory Coast	31
Kenya	44
Nigeria	50
Senegal	50
Tunisia	34
Asia	
India	50
Indonesia	45
Malaysia	35
Pakistan	69
Latin America	
Argentina	53
Bolivia	61
Brazil	56
Chile	51
Colombia	62
Costa Rica	46
Ecuador	54
Honduras	52
Mexico	57
Panama	40
Paraguay	69
Peru	56
Venezuela	45

Sources: S. U. Sethuraman, *The Urban Informal Sector in Developing Countries* (Geneva: International Labor Organization, 1981) for Asia and Africa; International Labor Organization, *World Employment 1996/7* (Geneva: International Labor Organization, 1996), tab. 5.5 for Latin America.

Figure 8.6 The Importance of Informal Employment in Selected Cities



Source: State of the World's Cities 2001, http://www.unchs.org/Istanbul+5/statereport.htm. Reprinted with permission.

Also need to realize that this can exist in the rural sector as well.

Large number of small scale producers and service activities.

Lack access to financial capital.

Lack of benefits such as health care, social security, …

Lack protection from the formal security forces, and may in fact be subject to harassment by them.

Note that it is linked to the formal sector. It provides inputs to the formal sector and formal sector employees often use the services of the informal sector (Livingston notes the shoe-shine guys in Nairobi, lunch places in Nairobi).

Is the informal sector a transition to a formal sector arrangement, or is it a permanent condition that we need to work with in and of itself?

The formal sector can't really grow fast enough to accommodate urban workers.

Not much transition to formal from informal.

"Missing middle"

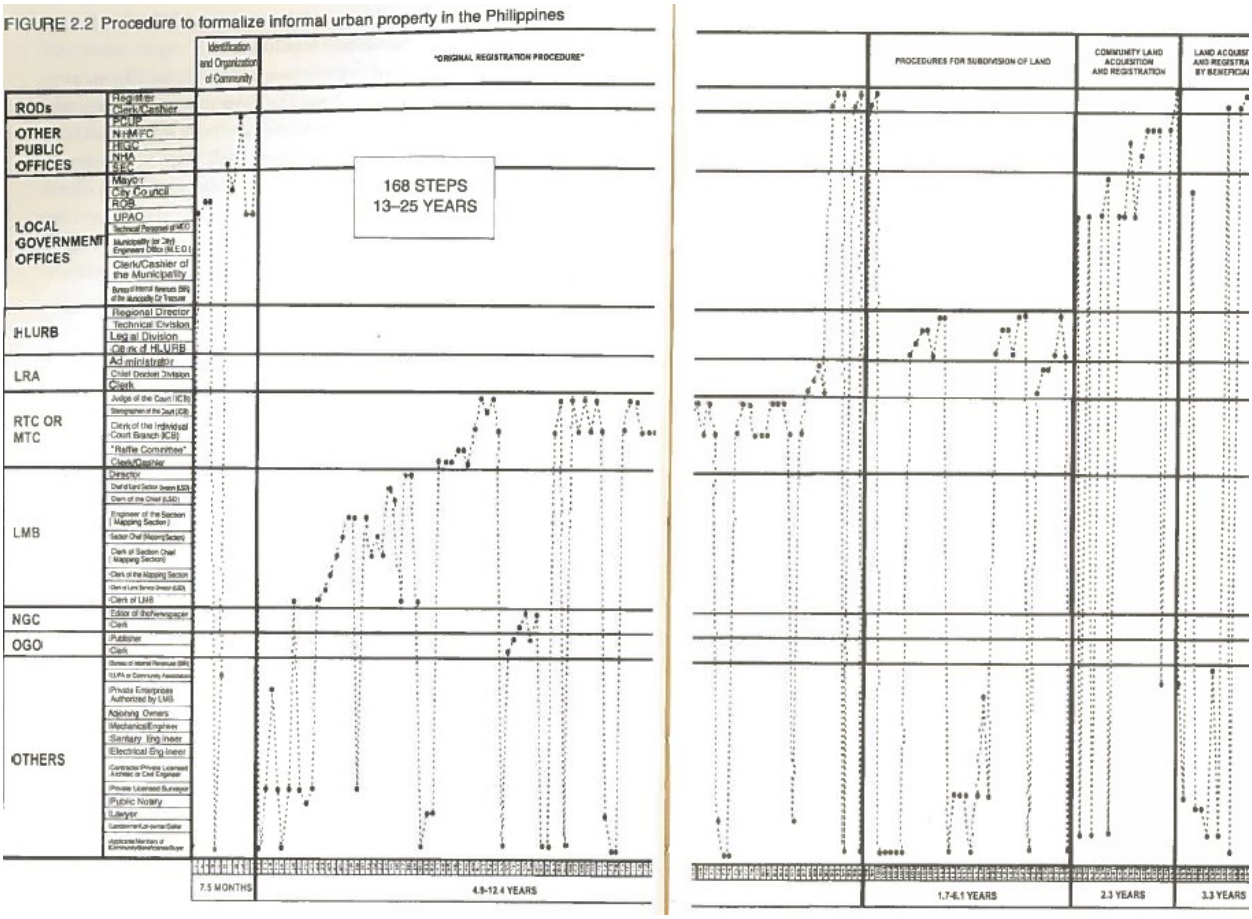
What are the benefits of an informal sector?

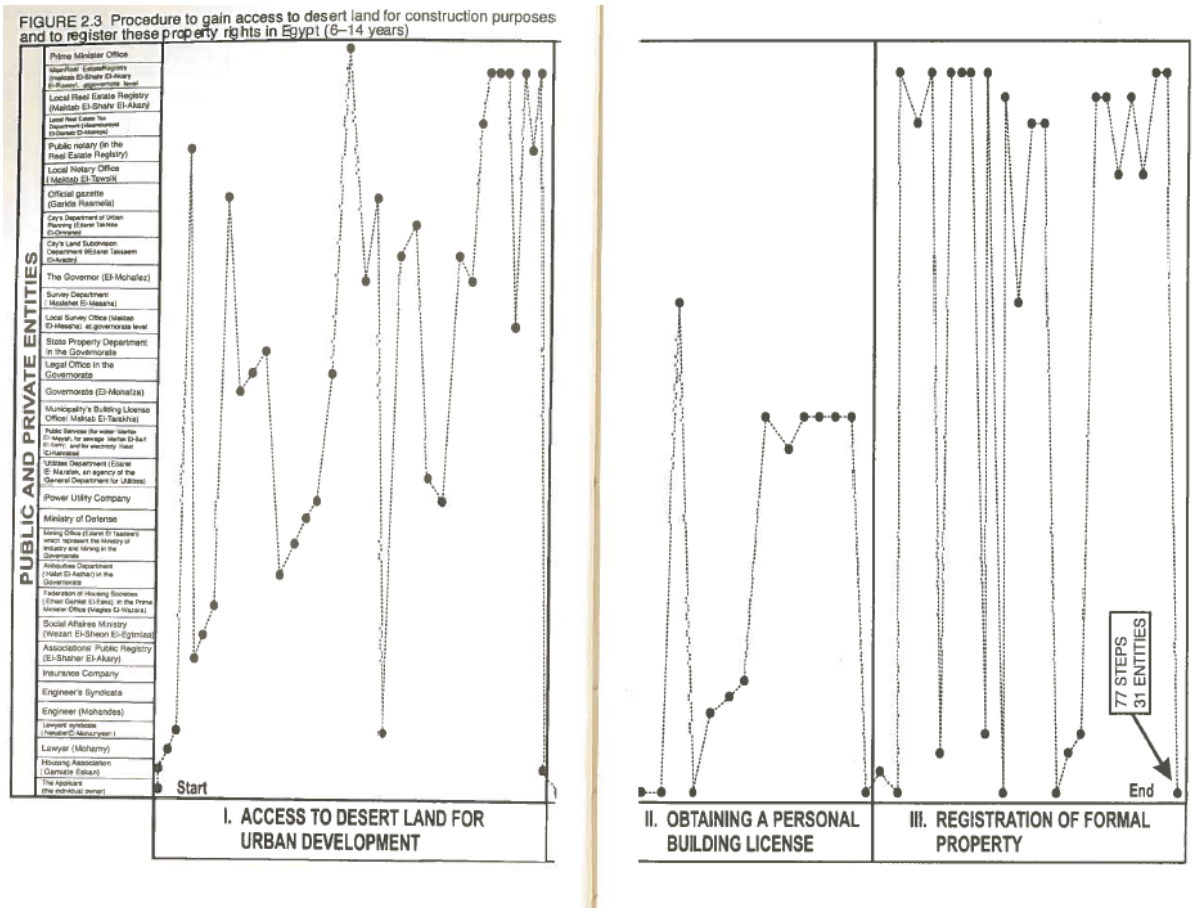
1) Informal sector exists and works even under conditions of neglect or harassment. This suggests it might be capable of growth if the environment changes.
2) They make do with low capital and high labor mixes, which reflects the situation of developing countries better than the high capital requirements often found in the formal sector.
3) Training role, on the job learning.
4) Due to constraints, develop innovative uses of local resources.
5) Recycling waste materials.
6) Many are poor, so improving the lot of the poor goes along with improving the informal sector.
7) In some cases, many are female, so improves the economic prospects of women.

What are the drawbacks of an informal sector?

1) No quality control, no health standards, no legal recourse.
2) Environmental damage of unregulated economic activity.
3) Urban congestion. Set up on sidewalks. Build on school playing fields and roadsides. Build in the middle of the road.
4) Increase incentives to migrate from rural area to urban area.

FIGURE 2.2 Procedure to formalize informal urban property in the Philippines





https://www.doingbusiness.org/en/rankings

What will help the informal sector?

1) Reduce red tape (DeSoto's book: In Peru it took 289 full days of work and cost $1,231. In Haiti 111 steps and 4,112 days; Philippines and Egypt also presented)
2) Training in ways that help the informal sector.
3) Increase access to capital

Livingstone points out a few issues worth mentioning, and we will follow up on the third next.

1) Informal sector is not just an urban phenomenon, but also a rural one.
2) Trade is a critical portion of the informal sector, and women in the informal sector tend to be here.
3) Household splitting, with some members in the formal sector, some in the informal sector.

Changing economic activities is not necessarily the same as migration.

Household level income diversification strategies can also be important to understand.

Why do households diversify their income sources?
Reardon (WD 25:5, 735-737; 1997).

1) Reduce income risk by diversifying income sources ex ante (don't know if it will be a good farming year, so I put up a beehive and sign up to help build the road just in case).
2) Maintain food security by diversifying income sources ex post (crops failed, so I go to the forest and chop us some firewood to sell).
3) Earn cash to invest in future improvements (my field only grows crops I eat, so I will carry bags of rice for the local trader to get some money to buy a plow).
4) Labor rich, capital poor economies. Often little in the way of barrier to entry (no union or guild in informal economy, but note caste issues may arise).

What are the main patterns you might see in rural areas:
1) Employment in the nonfarm labor market in the area.
2) Employment in the farm labor market in the area.

3) Self-employment in the nonfarm labor market in the area.
4) Employment in the migration labor market (to either farm or non farm employment).

Until the 1980's, the prevailing view was that rural people farmed, and that was the main story. A variety of studies of rural households finds that non-farm income ranges from 22 to 93% of total income on average, and that the average lies somewhere around 45%.

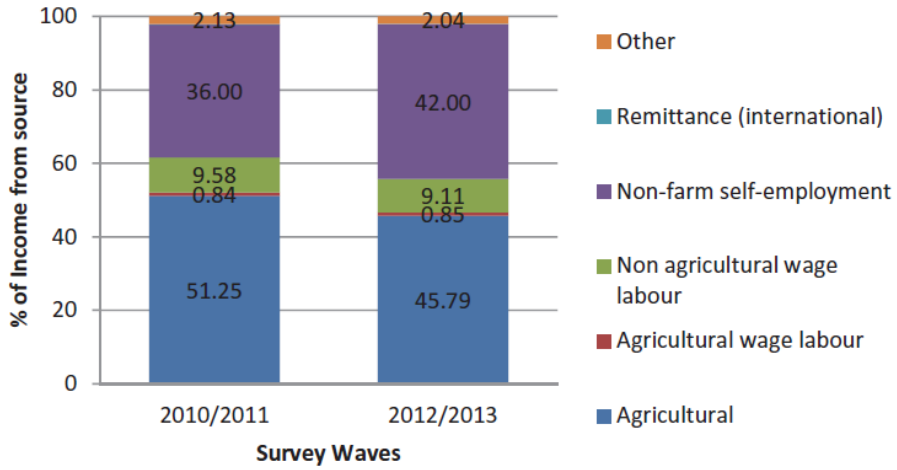


Figure 1. Distribution of total household revenue by income sources in rural Nigeria.
Note: Other means revenue from property rental, interest bearing savings account, or other returns on investment.

Table 4. Correlates of income diversification

	Random Effects tobit	Random effects tobit with Mundlak transformation	Fixed effects	OLS
Non-agric. wealth index	0.034***	0.019***	0.009**	0.018***
Non-agric. wealth index squared	−0.003***	−0.002***	−0.001**	−0.002***
Female headed	−0.096***	−0.094***		−0.046***
Age of head	−0.000	−0.000	0.001	−0.000
Labour force	0.026***	0.025***	0.013***	0.015***
Education (head)	0.007***	0.006***	0.003*	0.005***
Education (average HH)	−0.005*	−0.005**	−0.002	−0.004***
Land size/100 (ha)	0.034	0.032	−0.014	0.046**
Livestock/100	−0.014	−0.013	0.006	−0.025**
Saving credit coop. Presence	−0.015	−0.015		−0.024**
Agri. cooperative presence	−0.021	−0.022*		−0.010
Women group presence	0.013	0.012		0.011
Micro finance institution presence	−0.015	−0.014		−0.009
Bank institution presence	−0.078***	−0.082***		−0.034**
Distance administrative cap./100	−0.046***	−0.044***		−0.023***
Distance market town/100	0.007	0.010		0.009
Idiosyncratic shock	−0.006	−0.006	0.003	0.005
Natural shock	0.030**	0.029**	−0.011	0.029***
Price shock	0.028	0.027	0.047***	0.011
Year (second survey wave)	0.026***	0.027***	0.013**	0.010
Mean (wealth index over survey years)		0.025***		
Mean (wealth index square over survey years)		−0.003**		
Constant	0.039	0.054	0.167***	0.181***
Log likelihood/R-squared	−3122,882	−3117,502	0.014	0.080
Wald chi2	431.04***	440.33***		
Observations	5,858	5,858	5,858	5,858
Left-censored observations	2 393	2 393		
Uncensored observations	3 465	3 465		
Right-censored observations	0	0		

Table 5. Income diversification and food security indicators: regression results

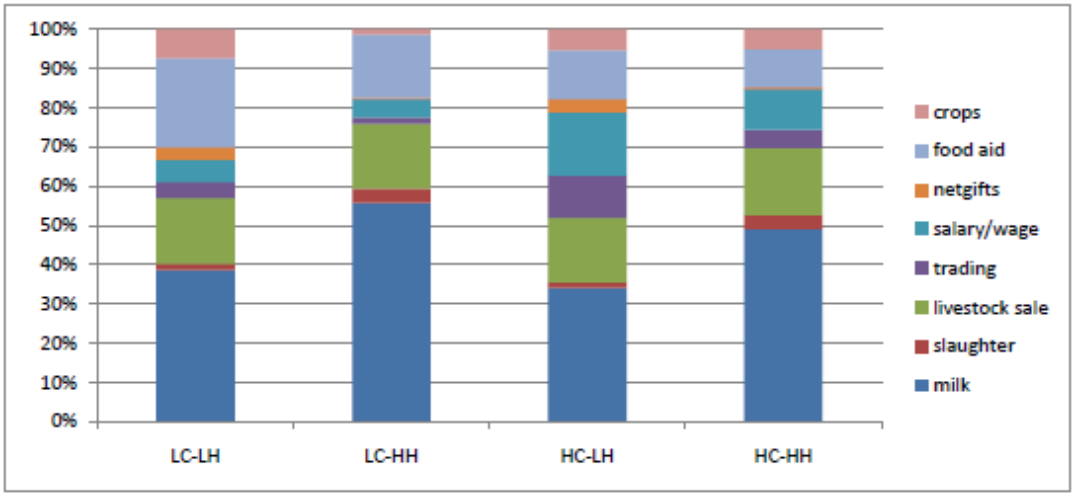
	Food accessibility	Food utilisation	Food (un)availability	
	Food expenditures p.c.	Dietary diversity	Nutrient stock (quality)	Nutrient stock (quantity)
Income diversification	60,883.480***	0.794***	−0.883*	−1.087
Idiosyncratic shock	−1,402.78	0.005	0.136	0.313**
Natural shock	687.82	0.014	0.563***	0.464**
Price shock	2,131.93	0.065**	0.480***	0.552**
Income diversification*Idiosyncratic shock	2,317.37	0.007	−0.365	0.237
Income diversification*Natural shock	4,090.71	−0.127*	0.151	0.307
Income diversification*Price shock	−9,855.45	−0.04	−0.625	−0.932
Residual from Table 4	−66,174.294***	−0.737***	1.148**	1.533**
Female-headed	9,650.768**	0.097***	0.094	0.033
Age of head	−80.117	0	−0.003	−0.001
Size of household	−9,853.893***	−0.005***	0.029**	0.032**
Education (head)	409.657*	0	−0.004	−0.008
Education (average HH)	2,177.429***	−0.001	−0.005	0.001
Land size/100 (ha)	−926.285	0.02	−0.169	0.175
Livestock/100	1,019.06	0.022	−0.455	−1.613***
Household borrowed money	1,696.73	0.031***	0.126**	0.065
Agricultural cooperative presence	2,249.15	0.022*	−0.339***	−0.203**
Women's group presence	−3,883.406**	−0.036***	0.064	−0.001
Micro finance institution presence	11,439.710**	−0.03	−0.378***	−0.576**
Bank institution presence	8,118.371**	0.060**	−0.484***	−0.639**
Distance market town/100	−13,414.872***	−0.044***	0.234***	0.119
Year (first survey wave)	12,872.883***	0.046***	−0.427***	−0.462***
Mean (Income diversification)	22,824.600***	0.034	−0.466*	−0.208
Mean (Income diversification*Idio. shock)	−25,057.657**	−0.094	0.136	−1.208
Mean (Income diversification*Natural shock)	−5,569.65	0.083	0.169	−0.166
Mean (Income diversification*Price shock)	51,364.224**	0.157	2.078***	2.816***
Constant	140,908.410***	1.917***	−0.002	−0.691***
Wald chi2	1103.11***	464.23***	2379.18***	1789.96***
Sigma u/α		0	1.313	1.553
LR test of sigma_u = 0/α = 0: chibar2		0	1332.51***	968.23***
Observations	5,778	5,828	5,857	5,857
Number of hhid	2,921	2,929	2,929	2,929

Notes: Region dummies are included in the regressions. Standard errors are bootstrapped with 100 replications. A random effects regression is used for the food expenditures equation and a random effects poisson regression is used for the other equations. The Mundlak transformation is additionally applied to all regressions. The likelihood-ratio (LR) test of $\alpha = 0$ compares the panel estimator with the pooled (Poisson) estimator. Significant levels are indicated with ***p < 0.01, **p < 0.05, *p < 0.10.

appeared to negatively affect food security, income diversification did not significantly contribute to reducing the effect of shock experiences.

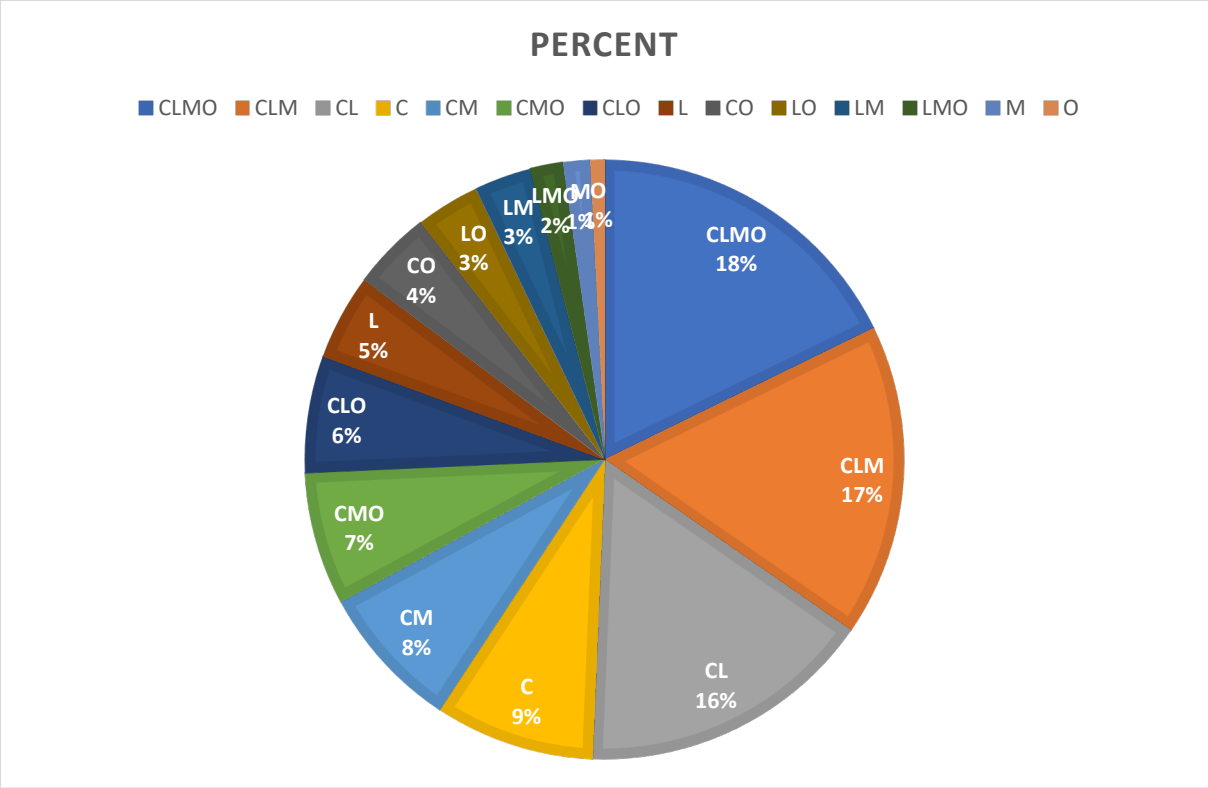
Dedehouanou and McPeak (2020)

In the sample east African pastoralists, we found the following:



LC is lower than median cash, HC is higher than median cash.
LH is lower than median herd, HC is higher than median herd.

McPeak, Little, and Doss (2012)



C – Cultivation, L- Livestock, M – Migration, O – Other

Rural Mali and Niger income diversification.

With regard to diversification of income sources, it is important to distinguish between a given household diversifying into different activities and diversification of different households in a given community into different activities.

To make this distinction, we construct a measure of activity concentration that sums the square of the percentage income from each activity.

That is, say a household gets all their income of $3 from selling lemonade.

$$\left(\frac{3}{3}\right)^2 = 1.0$$

Say their neighbor gets half their income of $3 from farming and half from fixing bike tires.

$$\left(\frac{1.50}{3}\right)^2 + \left(\frac{1.50}{3}\right)^2 = 0.5$$

Say another neighbor gets one third from milk sales, one third from farming, and one third from building houses.

$$\left(\frac{1}{3}\right)^2 + \left(\frac{1}{3}\right)^2 + \left(\frac{1}{3}\right)^2 = 0.33$$

At the household level, they may have the same income, but they differ in how diversified they are.

For these livelihood categories, the following table results for the average household concentration in income generation (average of the squared shares) – within household diversification.

This answers the question, how diversified is the average household income generation strategy for members of this group?

	Low Cash	High Cash
Low Herd	0.54	0.40
High Herd	0.54	0.47

In contrast, we can look at the concentration for the average income profile for the livelihood group (squared shares of the average income across households)- cross household diversification. This answers the question, how diversified is average income for this group?

	Low Cash	High Cash
Low Herd	0.23	0.20
High Herd	0.41	0.29

This indicates there is a great deal more diversification between households than there is within households.

Distinguish between comparative advantage diversification and jack of all trades diversification.

There are also intra-household aspects to income diversification. Women and men's tasks differ.

Intrahousehold income diversification.
Milk sales in northern Kenya.
Women sell milk, firewood, charcoal.
Men involved in livestock trading: 82% of sellers in our market monitoring were males.

How are benefits distributed?

Is having one member entering a new activity going to benefit the household overall?

How will a new opportunity interact with existing culture?