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The Income of Informal Economic
Activities:
Estimating the yield of begging in Brussels

Stefan Adriaenssens and Jef Hendrickx

THE INCOME OF INFORMAL ECONOMIC ACTIVITIES
Estimating the yield of begging in Brussels[1]

Stefan Adriaenssens
Jef Hendrickx
HUB - European University College Brussels[2]

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Abstract

This article proposes and applies a method to estimate the revenues of beggars in Brussels (Belgium). This is relevant for three reasons. First, though the literature on the informal economy assumes that the income will be low, we lack reliable empirical knowledge of informal street-level activities like begging, in particular due to the prevalence of many irregular Eastern-European immigrants among the begging population. Second, popular representation of beggars often depicts them as fraudulent, criminal and wealthy. Finally, the assumption of criminal organizations behind beggars legitimated the recent criminalization of (aspects of) begging in Western countries, e.g. in Belgium and France.

An analysis of existing attempts to measure beggars' income teaches us that the best design is to triangulate with data from different sources. Three datasets were collected, based on observation, self-reports and quasi-experimental observations. The combination of these datasets allows for more reliable and valid conclusions.

The hypotheses based upon popular myths and the assumptions behind the criminalization of begging are dismissed. The evidence does seem to support the hypothesis based upon the literature on informal activities.

Keywords: begging, informal economy, hard-to-reach populations, poverty, income.

1. Problem and hypotheses

Begging is performed for ritual or cultural reasons as little as to annoy passers-by. Nevertheless, the public as well as policy makers often seem to be attached to this point of view. This view is expressed in the small talk of bars and trains, and likewise is registered in discussions in political bodies. A large proportion of the public seems to be convinced that begging is connected with deceit, fraud and organized crime.

What then are the reasons people beg for? The sole consistent answer to this question probably is: people beg in order to yield an income. Whether begging as an income generating activity is chosen or imposed, is part of the problem investigated in this paper. The basic starting point is that begging has one dominant motivation: acquiring means.

We define begging as an informal economic activity in a public space, consisting of a receiver asking a non-reciprocated gift. Begging is an informal economic activity, in the sense that it is part of "those economic activities that circumvent the costs and are excluded from the benefits and rights (…) of formal society" (Feige 1990). In the specific case of begging this implies that the activity takes place within the public space, but as many other street level informal activities (Dean and Gale 1999), it has a disturbed relationship to the formal and mainstream users of this space (other examples in Donovan 2008; Venkatesh 2006). The informal character of begging mainly refers to the second part of Feige's definition: for all kinds of reasons, the work of begging does not give entrance to formal rights and benefits. In other words: begging doesn't open on legal protection or rights normally resulting from formal economic activities or jobs.

In some countries, regions or cities, begging is explicitly prohibited by law or other regulations. This is the case in England and Wales (Fitzpatrick and Jones 2005). In other places, begging may be allowed; sometimes the right to beg is warranted. In the United States e.g., jurisdiction explicitly labeled begging as an expression of opinion, thus protecting it as a first amendment right (Hershkoff and Cohen 1991). In Belgium, the legislator abolished the penalization of begging and vagrancy in 1994 (Jamar and Herbots 2006). Courts usually interpret this as an explicit acknowledgment of the right to beg (Fierens 2004). However, even in these occurrences that legislation or jurisprudence protects beggars in their activities, panhandling continues to be informal in social reality because of its insecure and unregulated nature. For example in fiscal and social security matters, beggars find themselves in a legal no man's land; they derive no rights in terms of social benefits from their activities. Furthermore security forces often actively suppress begging activities in reality. This has a lot to do with the fact that beggars are users of a fiercely competed public space. Within informal work, begging is part of the subtype of so-called *survival activities*, denoting that people are immersed in off the books transactions because of the destitute economic position they find themselves in (Portes and Haller 2005).

In this article we present and apply a method in order to estimate the revenues of people begging. There are three good grounds legitimating such an endeavor:
1° As begging is a survival activity, belonging to the underground economy, uncovering the yields improves our understanding of this hidden sector of economic life.
2° Common sense about begging is caught in a web of social myths and unsubstantiated presuppositions. The falsification of such everyday judgments and myths is a general function of sociology.

3° Recent legislation in Western countries is based on strong assumptions about the nature of begging and beggars. Some of these assumptions in recent legislation, namely those relating to the income of beggars can be tested in this research.

We elaborate all three grounds consecutively.

First, it is important to measure the living standard of people thrown back on the underground economy for their survival. "Underground economy" is the broader concept, denoting all off the books transactions and institutions, including both the informal and the illegal economy (Feige 1990). 'Informal' then refers to activities that are not forbidden by themselves, but that take place off the books; 'illegal' activities are explicitly forbidden by law (e.g. human trafficking or production of illegal drugs). Begging may be an informal respectively an illegal activity, depending on the legislation of the country. In Belgium however, the legislator has stated explicitly that begging cannot be prohibited. Therefore, begging belongs to the informal economy in Belgium.

Under the surface of the huge diversity in approaches of the underground economy, at least on some determinants of engaging into the informal economy, there seems to exist a consensus. Informal work predominantly takes place within two distinct markets: a top end of relatively affluent workers, often simultaneously employed in formal jobs, and a bottom end with informal work performed by marginalized groups (Williams 2004). For the bottom end, the main determinant of informal activity thus is poverty, or more precisely: a lack of opportunities to obtain income from formal activities. We are mainly interested in those people deploying informal activities at the bottom end of informal labor markets. The literature thus often finds an inclination to informal activities by those who have little or no alternative income generating alternatives (see also Van Eck and Kazemier 1988; Williams and Windebank 2002). Usually, this reason for informal work is conceptualized as an informal economy of survival (e.g. Portes, Castells, and Benton 1989). This subsistence motive correlates with low quality occupations, low productivity and income (Rosser, Rosser, and Ahmed 2000; Trejos Solorzano and Del Cid 2003).

The statement that poverty and the corresponding lack of opportunities lead to a higher supply of informal work is corroborated by data at a national level. The collapse or decline of national income, as occurred in many Eastern-European countries at the end of the 20th century, contributed to the growth of informal activities (Renooy et al. 2004). However, most economists studying the informal sector with macro-economic comparative material seem to minify the significance of the subsistence motive (e.g. Friedman et al. 2000; e.g. Schneider 2007). Even so, they generally acknowledge the relevance of national income as a determinant; this correlates strongly with the prevalence of poverty.

This first ground is the most fundamental basis for the reconstruction of the beggars' income. A reliable estimate may give us an idea of the *real* income of begging. As many in the begging population mainly or solely depend on begging for their income, it also may lead to a reliable estimate of the real standard of living of beggars. The lack of knowledge of the standard of living of informal workers in general is even more acute for beggars as the majority of this group consists of irregular immigrants. Provided begging is a survival activity, one can predict that the income begging yields is rather low in comparison to the income from formal work. Given the unattractive and harsh nature of begging (Smith 2005), one can even assume that it will be lower than most other informal activities. As we will show later, the scarce systematic research on beggars' income seems to support this hypothesis.

The second ground for estimating the beggars' income has to do with everyday judgments of begging. Many pejorative depictions of begging and beggars persist in society. A number of these social myths are ubiquitous and recurrent. We use the concept of a myth as a pre-scientific judgment guiding collective behavior (as in Elias 1984)[3].

Even at a cursory glance, the representation of beggars throughout the centuries has quite persistent characteristics (Erskine and McIntosh 1999). The discourse on begging recurs to three associated images. First, beggars are often represented as fraudulent, e.g. faking illness or a disability. Second, one is often confronted with images of beggars as 'professional' impostors working in an organized criminal network. Strongly linked to both myths, is the third recurring image: the great wealth beggars (can) acquire through these fraudulent and organized activities. These images keep reappearing throughout the modern period, from the 16th century on, and maybe even before that (examples in Geremek 1980; Woodbridge 2002).

The cited myths strongly correspond to the early modern genesis of poverty policies (Kahl 2005). These new forms of policy go together with a changing image of the poor; they are less perceived as a source of salvation through charity, and increasingly become a source of policy. Policy in this sense amounts to a more or less rational tackling of the poor with the finality of the elimination or reduction of poverty. Both the goal of reducing the negative external effects of poverty, as well as a genuine humanitarian concern with the poor may underlie these poverty policies. The policy itself therefore can be idealtypically charitable (Hermer 2006), but just as much criminal (Collins and Blomley 2003; Thacher 2004). In general, the former is inspired by the concern for the fate of the poor. The latter is built on the idea that poverty primarily poses a threat to society (De Swaan 1987; De Swaan 1990). These idealtypical ways of tackling poverty respectively the poor, hardly ever exists in reality. In real terms most policies consist of a mix of both concerns, as exemplified by the oldest policy texts such as Vives' *Liber Vagatorum* (Matheeusen 1998).

Third, there exists a practical legal reason for this research. The second ground refers to collective mentalities, confined to the sphere of cultural analysis. However, to the extent that these images inspire action of the state or other governments, this research also has practical policy relevance. Apart from the impact on the public's contact with beggars, the prevailing myths about beggars also inspire the construction of formal rules, in particular lawmaking. This seems to have happened in quite a few Western countries in the last decade or so, among others in North–America (Ellickson 1996; Hopkins Burke 2000; Mitchell 2005), but also in continental Europe. Recently quite similar penal laws concerning begging were adopted in France[4] and Belgium[5]. Both criminalize so-called 'organized begging'. Thereby the explicit parallel is drawn with prostitution and human trafficking as activities by organized crime. Moreover, as an implicit assumption, 'organized begging' basically is seen as a phenomenon closely associated with irregular migration and human trafficking.

The juridical association between (organized) begging and prostitution and human trafficking should be elucidated. In the explanatory memorandum of the enactment[6], the government accounts for the necessity of the law by referring to the exploitation of people who beg.

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[3] The concept of 'myth', as many social-scientific concepts, has been removed from its original religious denotation of a supernatural founding recital.
[4] Article 706-55 of the French Code of Penal Procedure, adopted on February 12th 2003.
[5] Article 433ter and 433quater of the Belgian Penal Code, adopted on August 10th 2005.
[6] Chambre des Représentants de Belgique (14 janvier 2005), *Projet de Loi modifiant diverses dispositions en vue de renforcer la lutte contre la traite et le trafic des êtres humains*, Document parlementaire de la 51e législature, n° 1560/001, 100 pages.

Thereby the parallel with the exploitation of prostitution and human trafficking is articulated explicitly and repeatedly:

"This (act) does not have as a goal to criminalize the offence of begging again, but to punish those who exploit the begging of others, analogous to the legislation existing in prostitution." (page 4)

"(…) After the example of the exploitation of prostitution, the exploitation of mendicancy can be looked upon from the angle of human trafficking." (page 16)

All the more, the formulation of the new article 433ter in the penal code is almost identical to the older section of the penal code prohibiting the organization of prostitution.

A second observation relevant to this research, concerns the choice of the legislator to define the organization of begging with a minor as an aggravating circumstance (article 433 quater of the penal code). Though the memorandum hardly provides arguments for this provision, the parliamentary discussions make clear that the legislator assumes that the children accompanying adult beggars constitute a serious problem of child abuse, because the children are supposed to "evoke pity of the passer-by" (article 433 ter, 1° of the penal code). Thus the assistance of children in the begging activities of adults is assumed to heighten the income of the beggar through the pity the child is supposed to raise.

The third ground for researching the income of beggars thus lies in the recent lawmaking on begging in Belgium and France. These new laws criminalize the so-called 'organized' aspects of begging. Thereby the proponents suppose that begging is as rewarding as the organization of e.g. prostitution. In addition, they often assume begging is closely related to human trafficking, occurring in a context of organized and even compulsive begging. Finally, these organizations are assumed to employ strategies enhancing the return. Children are supposed to be an important instrument of organized and compulsive begging, as they are supposed to heighten the gifts to beggars substantially.

In short, the motivation to research the income of beggars is grounded in the social-scientific line of research on informal economic activities and in the social myths concerning begging and beggars, sometimes leading to collective action and formal rulemaking. The most basic hypothesis refers to the general height of the income of beggars. Fundamentally, the distinct grounds for researching this lead to contradictory expectations. On the one hand the hypothesis based upon the literature on informal economies, leads us to the proposition that begging generates a low income. On the other hand, from the social myth about the wealthy beggar we infer that beggars may yield a higher income from their activities. This latter proposition will serve as the basis for our empirical tests, as it is the foundation of the criminalization of some aspects of begging. As illustrated above, the criminalization of (the exploitation of) begging is based on strong assumptions with little empirical foundation. Therefore, the hypotheses we construct should allow us to falsify these assumptions. However, a direct measure of 'exploitation' and 'criminal organization of begging' is difficult to acquire. We therefore make predictions deduced from the general assumptions described above. The means yielded should be considerable, starting from the assumptions that (1) begging is an activity of organized criminal groups, (2) it is closely linked to human trafficking and (3) begging has structural equivalencies in organized prostitution.

Therefore the best strategy to falsify (or verify) this myth, is an empirical research on the income generated by begging activities. However, this falsification is destined to be complicated, due to the nature of begging: informal, sometimes even illegal, and performed by outsiders. This paper gives an account of a research conducted in Brussels (Belgium), which allows estimates of the return of begging. Moreover, we attempted to measure the

differences in income between migrant and autochthonous beggars, and the differences in income generated by the assistance of children in begging.

Four hypotheses will be tested with respect to the exploitation of begging: two referring to the overall profitability of begging activities; one referring to the difference between the profitability of begging for autochthonous persons respectively migrant East-European beggars; and finally one referring to the surplus income by the assumed properties of exploitation, in particular by begging with children. The hypotheses are stated as follows:
- ✓ Begging generates an income around the poverty line
- ✓ The profitability of begging is comparable to other criminal activities
- ✓ Profitability of begging is especially high for migrated beggars
- ✓ Begging with children yields a higher return

The first and the second hypotheses refer to the discussion whether begging is able to generate high profits. There is a contradiction here between the assumption it does, inspired by the prevailing social myths (as a motivator for contemporary lawmaking) and the prediction on the yields of begging one would expect on the basis of social-scientific literature on informal economic activities. The first hypothesis is inspired by the social-scientific literature; the second hypothesis builds upon the images of popular myths. If the yields of begging are low, e.g. because it doesn't allow beggars to earn an income above the poverty line, this confirms the informal sector research. If the yields are higher, it may lay an empirical foundation to verify the social myths about high profitability of begging.

The confirmation of the first hypothesis is a necessary condition for the expectation of criminal organization of begging, and concurs with the social myth of the wealthy beggar. However, also for this second hypothesis one expects a falsification based upon the social-scientific literature on informal economic activities. According to this line of thought, one expects begging is barely able to bring in enough resources in order to evade poverty.

The third hypothesis also refers to the assumptions under the recent legislation postulating that there exists a close connection between human trafficking and 'organized' begging. Therefore, one would expect that in particular the yields of migrated beggars are high, as opposed to the more traditional activities of autochthonous beggars.

The final hypothesis refers to the phenomenon of begging with children. The recent Belgian and French penal laws criminalizing 'organized' begging assume children are brought in with the intent to increase revenues. We will test whether the empirical evidence supports the idea of increased revenues by begging with children.

2. Previous attempts to measure the income of beggars

Most of the everyday judgments on beggars are based upon spectacular and sometimes outright fantasized accounts of their yields. Even if these accounts were true, there still is the chance that the cases studied represent outliers. Therefore we assume that these accounts are suitable cases for discourse analysis, rather than an entry to reliable data on the *real* income of beggars. This way, we will not go into them.

In the more serious studies of the life of beggars, quite often, the data collected and analyzed are of a qualitative nature (e.g. Danczuk 2000; Fitzpatrick and Kennedy 2000; Lankenau 1999; Wardhaugh and Jones 1999). These studies are very valuable in order to fetch the beggars' experiences and perceptions. For our purposes however, they do not provide a representative basis for estimates of the income of beggars. Therefore, we further concentrate ourselves on quantitative research strategies.

The reports of systematized attempts to estimate the beggars' income are scarce. More importantly: most strategies have fundamental weaknesses. These shortfalls are partly inevitable given the complexity of the endeavor. The collection of reliable data in this field is particularly difficult given the concealed nature of the activities and the hard-to-reach population of beggars. Notwithstanding, existing attempts to measure the yields of begging are a useful start for our own attempt to do so: they will result in an overview of the existing methods and of the shortcomings to avoid.

Roughly speaking, two approaches of data collection exist in the literature: self-reports and observation of beggars. Some estimate the yields beggars make through observations, but most of the studies, not surprisingly, base their estimates on standardized questionnaires of beggars. This implies that the income is based on a self-reported measure. Looking at the (scarce) attempts to estimate beggars' returns, some general problems emerge. Most studies use one source of data. However, both observations and questionnaire-based self-reports have serious biases that cannot be remedied unless one builds on other sources. By means of the available published reports, we will assess the advantages and disadvantages of both approaches, and show that the various weaknesses of both approaches in estimating the beggars' income

       a) necessitate supplementary methods of data collection and

       b) make a mixed method approach recommendable.

An overview of the reviewed studies is presented in table 1. We will first discuss the estimates based on self-reports, before we review the observatory approach.

Study	Method	Sample	Yield measured
(Jiang and Wu in Lu 1999)	- Questionnaire - Unit: beggars in Shangai	- Sampling method unclear - n=700	Self-reported monthly income
(Murdoch 1994)	- Questionnaire - Unit: beggars in central London	- Sampling method unclear - n=145	Self-reported daily income from begging
(Bose and Hwang 2002)	- Questionnaire - Unit: beggars in Toronto	- Sampling method: systematic search of public places - n=54	- Self-reported monthly income - Lowest payment for interview with high response rate
(O' Flaherty 1996)	- Questionnaire - Unit: 'daytime streetpeople' in Manhattan.	- Systematic search at well-known locations of streetpeople in Manhattan. - n=209	Self-reported maximum and minimum daily earnings
(Butovskaya et al. 2004)	Observation of beggars during 2 minutes.	- Observations of beggars in Moscow trains - n=178	Number of gifts in 2 minutes.

Table 1: Studies with estimates of beggars' income

As indicated, questionnaire based self-reports are the most common indicators of beggars' income. There is one peculiar illustration of this approach in the interwar period: in 1932 and

1933 two female sociology students conducted a survey of 700 beggars in Shanghai (cited in Lu 1999). In this survey, the beggars were asked to list their actual monthly income (at the time of the interview), and the monthly income from their previous occupation. Also, the survey asked the income of the other family members, as begging often was a family activity. Though selection of respondents is a quite important dimension of the research strategy, Lu's article doesn't mention the sampling strategy used by the interwar researchers. Also in some contemporary studies little information is provided about crucial issues as the selection of respondents. For example Alison Murdoch's research report (1994) only mentions the 145 respondents were interviewed in streets, day centers and hostels in central London, but remains unclear about the criteria for the selection of respondents.

Luckily, most contemporary studies do document the sampling strategy of respondents. For example Bose and Hwang (2002) researched begging with the help of a standardized questionnaire in Toronto, Canada. The researchers "located panhandlers by systematically searching major streets and subway stations" (Bose and Hwang 2002, 477). They estimated the income of beggars through self-reported hourly, daily and monthly yields. The general conclusion of this research was that begging is the main source of the respondents' income, but that it yields rather meager revenues. From a methodological point of view, the Toronto study attempted to test the reliability of the beggars' self-reported income through offering different compensations for cooperation to the interview. According to the researchers, the establishment of the lowest amount with a high response rate would serve as an indication of their income. This interesting approach could hardly be tested because the number of respondents was rather low (n=54).

In the same vein, O' Flaherty (1996) attempted to systematically question the "daytime streetpeople" in New York's Manhattan by cruising the "well-known locations of streetpeople" (82) during several weekends. The author doesn't communicate the proportion of beggars within the "daytime streetpeople", but he did question the survival strategies, of the 209 respondents, amongst which panhandling is one of seven categories. The general conclusion is consistent with the study by Bose and Hwang: low earnings for long and hard work (O' Flaherty 1996, 84-85).

The basic disadvantage of self-reported measures obviously has to do with the possible lack of knowledge by the respondents and socially desirable answering. Both biases may be important if one surveys the income of beggars. Many studies on beggars (e.g. Melrose 1999) and other excluded groups or hidden populations (Sifaneck and Neaigus 2001) report the general distrust of these populations towards outsiders. Also, beggars often confuse interviewers with officials, so that they have the perception that telling the truth about their income may lead to sanctions. Finally in our fieldwork we often noticed respondents had problems with questions about their average income, probably due to the lack of any formal recording or registering of their income; usually the yields are immediately consumed. These drawbacks make us decide self-reported measures should be used only for information that cannot be attained otherwise. In addition, we will avoid data based on self-reports regarding income.

The second method exists of observations in order to estimate yields. We only found one example of this observatory approach: Marina Butovskaya (2004) used this method in order to compare the amount of gifts received in a fixed time span by Russian beggars of different ethnic backgrounds. Basically this is an interesting approach that may be able to overcome some of the weaknesses of self-reported income measures. However, the linear relation between the number of gifts observed in a fixed time interval on the one hand and the income of a beggar, rests on two strong assumptions.

First and foremost, it assumes that the alms received have the same mean value for each (type of) beggar. The researchers have no data supporting this assumption, and neither do they propound convincing arguments for this a priori (in fact, the problem isn't addressed). Other research does indicate that most of the alms received are rather small, mainly consisting of coins, literally 'spare money' (Adler, Bromley, and Rosie 2000; McIntosh and Erskine 1999). This does not exclude that the standard deviation may be high, or that the mean gift varies considerably between beggars. Almsgivers may give different sums to different types of beggars. The effect of differences in mean revenue may also be caused by a certain specialization of almsgivers, related to their perceptions of 'deserving poor'.

Second, one should be aware of the nature of the measure of the frequency of observed gifts in a given time period: it is an indicator of productivity. The use of this measure of productivity, i.e. revenue in a given time period, passes over the probable differences of the total amount of time beggars invest in their activity. Contrary to the self-report method, direct observations don't take the working time of beggars into account.

Data based on observations avoid the drawbacks of self-reported data. Observing beggars and their alms gives access to the real life income beggars have. In this respect, observation clearly is a superior technique of data collection for our purposes. However, the observational method has severe limitations in comparison to questionnaire based surveys. Basically only the frequency of gifts is easily observable. The reduction of the income to the frequency of gifts builds on the strong assumption that gifts have a very stable value. There is no strong indication that this assumption is valid. Probably the height of individual gifts is influenced by the relation between beggar and passer-by, the motivation of the giver, and so forth. Finally, without information about the beggars' working time, estimates fo the income are not possible.

3. Research design and data collection

In order to estimate the beggars' income as precisely as possible, we constructed a design which is based upon the conclusion that data based on self-reports and observations have distinct limitations. Therefore, we used both methods, complemented with a particular quasi-experimental version of participant observation. In short, the collected data in order to test the hypotheses consist of three distinct yet connected sources. They correspond to the different data we need in order to estimate the income of beggars. Therefore we decompose the income of beggars in the aspects frequency of gifts, value of gifts and begging time. The calculation of the income of begging in a given time period is therefore based on two elements: the value of the alms and their frequency. In order to estimate the income from begging, one needs information about the time beggars are active.

The calculation was complicated because of the variety of alms beggars receive. Basically they receive gifts in money, mainly coins and sometimes notes, and in kind. The latter type consists of a wide variety: cigarettes, food, soft drinks, and sometimes even utensils. We decompose the income of beggars in a given time period t ($Y(t)$) as the sum of the value of gifts in coins ($Y_C(t)$), notes ($Y_N(t)$) and kind ($Y_K(t)$):

$$Y(t) = Y_C(t) + Y_N(t) + Y_K(t).$$

The mean income for every term is the mean value of the respective gifts multiplied by the mean number of gifts (mean frequency) in a time period t :

$$\mu_{Y(t)} = \mu_C \cdot \mu_{NC(t)} + \mu_N \cdot \mu_{NN(t)} + \mu_K \cdot \mu_{NK(t)}$$

where μ_C (respectively μ_N, μ_K) denotes the mean value of gifts in coins (respectively in notes, in kind) and $\mu_{NC(t)}$ (respectively $\mu_{NN(t)}$, $\mu_{NK(t)}$) denotes the mean number of gifts in coins (respectively in notes, in kind) in a time period t.

To measure the income of begging, one has to multiply the value of the alms received in a fixed time period (e.g. per hour) by the begging time. As stated above, these estimates are based on observations and quasi-experimental observations. In addition, one needs information about the 'working time' beggars invest in their activities. Therefore the Brussels beggars were interviewed with the help of a standardized questionnaire. We will start with the latter data source.

A first source of data resulting from standardized interviews with beggars in the Brussels Capital-Region, conducted in the autumn of 2005 and the spring of 2006 (n=268). As argued above, beggars are particularly hard to survey. Three typical problems arose: the absence of a register, the volatility of begging, and the difficulties to question beggars.

First, there exists no register of beggars. Earnings are dependent upon traffic, either pedestrian or motorized. Therefore an access to the population of beggars was constructed with the help of a detour through the places where people beg. A register based on three sources was constructed. First, 97 different begging locations were found by volunteers (students, commuters, residents and social workers) who noted all places where they encountered beggars between 21 September and 27 October 2005. Supplementary to this direct observation, the police zones were asked to report the locations where they encountered beggars (26 additional locations). Finally we extended this register with all the public marketplaces, subway stations and supermarkets of the major chains (132 additional locations). This resulted in a frame of 255 locations where beggars might be active.

A second potential problem was the assumed short-term variation in the begging population. The precarious judicial status of a large proportion of the beggars, the possible transience of migratory beggars, and the perceived irregular approach by the police force, support the assumption that begging is a volatile phenomenon. The choice for a register of begging places rather than beggars also bears the risk that respondents were not begging at the time the location was observed. Therefore, each location was visited three times at different moments of the day and in the week. Furthermore, the researchers chose to conduct two waves of interviews: one in the autumn of 2005 (between 3 November and 23 December), one in the spring of 2006 (between 22 March and 23 April). This prevented that our data were too much influenced by seasonal coincidences.

Finally we took measures to overcome the inaccessibility of beggars. This group is hard to reach due to general distrust and the diversity of the linguistic and ethnic background of beggars in Brussels. Given the population, there was an expectation of a significant proportion of analphabetic respondents (afterwards confirmed by the data). Face-to-face interviews guaranteed us that illiterate respondents weren't excluded from our research. As the respondents came from very diverse ethnic and linguistic backgrounds, a questionnaire in four languages was composed (French, Dutch, English and Romanian), and interviewers mastering these languages were recruited. The distrust of beggars and other poor people is worsened by officially looking questions, as is the case with standardized questionnaires. An extra complication consisted of the possible refusal to collaborate because the interview took 'working time' from the beggars. Therefore, the beggars were offered a payment of 5 € in exchange for their collaboration. In general this proved to be an effective method: 85.8 % of the respondents agreed to be interviewed.

The survey taught us that the great majority (85.4%) of Brussels beggars exist of three types of beggars: male autochthonous beggars, female Roma beggars alone respectively

accompanied by children. Autochthonous beggars are those born in Belgium or with an official language of the Brussels-Capital region as a mother tongue (French or Dutch). Members of this group are often homeless and have a history of drug or alcohol addiction. Roma beggars originate from Romania and have a precarious residential statute.

A second source of data for the estimate of the income of beggars was collected through observations of three types of beggars. In first instance we envisaged to use this method only in order to estimate the mean frequency of gifts. This second source of data thus consisted of the observation of a sample of begging activities[7]. Thereby the frequency of gifts received was measured for three types of beggars that were theoretically relevant, but at the same type represent the large majority of beggars in the Brussels public space, taken together. The three types are autochthonous male beggars, female Roma beggars and female Roma beggars accompanied of children. Beggars were randomly selected in an area in central Brussels. The researchers recorded the exact time of alms collected by beggars during sixty sessions of 36 hours in total. The duration of the observed period was quite uneven, as the researchers had no control over the beggars or their context. During these sessions 225 gifts were recorded. The duration of the observations was divided evenly for each type of beggar.

The data from this second source were meant to estimate the mean begging time beggars of all three types needed to get a gift in kind or notes respectively a gift in coins. However, it proved possible to determine the value of the gifts in kind or notes through these observations. Therefore, the income in a given period of begging time from gifts in kind and notes was estimable on this source of data alone. As we assumed that the observation of *real* beggars was a more reliable and therefore superior kind of data in comparison to data of test subjects simulating begging, we preferred to rely on the former data as much as possible. The reason why gifts in kind and in notes are taken together thus is based on a methodological rather than an intrinsic communality: both were measured totally by observations of beggars.

The third source of data was necessary in order to be able to estimate the mean value of the gifts in coins. For the estimate of the value of gifts in coins, a quasi-experimental use of observation was set up[8]. We simulated begging activities in public places, mainly on and in the vicinity of the Rue Neuve, an important commercial area in central Brussels with frequent begging activities. Six experimental subjects imitating two different types of beggars engaged in begging activities during sessions of two hours. Thereby Roma female and autochthonous male beggars were simulated. The third type of beggars, female Roma accompanied by a child or children, has not been included in the design for ethical reasons. The six test subjects consisted of four male and two female beggars. Test subjects begged during three sessions of two hours each. For every gift in coins, the test subjects recorded the value, the time and some background variables of the almsgiver with the help of a small hidden microphone. During the sessions, the test subjects were watched all the time by an observer, for backup in case of problems with the police, other beggars or passers-by and to have a backup record of the timing of the gift and the characteristics of the almsgiver.

In total 149 gifts in coins were recorded during these sessions. This quasi-experimental use of observation allowed us to estimate mean and the distribution of the value of alms in coins for the main types of beggars. We are well aware that the denotation of 'quasi-experimental use of observation' is a rather inelegant formulation. As the design has no casual ambitions whatsoever, it was a bit awkward and inaccurate to call our research design just a 'quasi-

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[7]   Data collected between November 9th 2005 and February 10th 2006.
[8]   These data were collected between October 17th 2005 and January 31st 2006.

experiment'. Therefore we added the reference to observation. On the other hand, because we actively manipulate one element - the exposure of the public to a certain kind of beggar – we assume that a reference to quasi-experimentation is legitimate.

The combination of the data of the second and the third sources allow us to estimate the return of begging activities in a given time period. This thus provided us with the necessary data to measure the mean and distribution of the frequency and values of the distinct types of gifts (coins, notes, in kind), itemized per type of beggar. The data obtained from the questionnaire are used to estimate the mean time our respondents 'work'. This allows us to make the inference from productivity of begging to estimated income.

4. Testing the hypotheses

4.1. Estimates

The most recurrent type of gift is the gift in coins (81.8 %). There are only small and non-significant differences between the types of beggars regarding the gifts in coins. First we compute the confidence interval for the mean gift in coins, as depicted in table 2.

	N	Mean	St.dev.	95% confidence interval for mean	
				Lower Bound	Upper Bound
GIFTS IN COINS[9]					
Roma alone	55	0.76	0.69	0.58	0.95
Autochthon	94	0.79	0.72	0.64	0.93
GIFTS IN KIND OR NOTES[10]					
Roma with child(ren)	12	1.55	0.35	0.78	2.33
Roma alone	8	1.58	0.61	0.14	3.01
Autochthon	9	1.34	0.51	0.16	2.51

Table 2: the value of gifts (in €)

From the two sample t-test for comparing the mean value of coin gifts between Roma (alone) and autochthonous beggars, we conclude that there is no significant difference (p-value = 0.84, regardless t-test with equal or unequal variances).
Analogously, an ANOVA-test allows us to compare the mean value in kind or notes. Here also no significant difference between the three types of beggars exists ($f = 0.073$, p-value = 0.93). Although the gifts in kind or notes don't seem to be normally distributed, this normal distribution cannot be rejected on the basis of a Kolmogorov-Smirnov test.
Combining the results, we calculate a 95% confidence interval for the mean value of the gift in coins is [0.66, 0.89] and for the gift in kind or notes is [0.95, 2.03], as can be seen in the table below.

	N	Mean	St.dev.	95% confidence interval for mean	
				Lower Bound	Upper Bound
Gift in coins	149	0,78	0,71	0,66	0,89
Gifts in kind or notes	29	1,49	1,41	0,95	2,03

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[9]   Source: quasi-experimental observation.
[10]   Source: observation of beggars.

Table 3: confidence intervals for the value of gifts (in €)

Next we compute the number of gifts per hour, by analyzing the interval times between the gifts. We performed a Kolmogorov-Smirnov test to confirm that they can be modeled by an exponential distribution. We use the following formula for a 95% confidence interval for the mean of an exponential distribution (Festinger 1943).

$$\left[\frac{2n\overline{X}}{\chi^2_{2n,0.975}} , \frac{2n\overline{X}}{\chi^2_{2n,0.025}} \right],$$

where $\overline{X}$ is the sample mean (in minutes) and $\chi^2_{2n,0.025}$ (respectively $\chi^2_{2n,0.975}$) denotes the 2.5% (respectively 97.5%)-percentile of a chi-square distribution with $2n$ degrees of freedom. We deduct the table below.

	N	Mean	St.dev.	95% confidence interval for mean	
				Lower Bound	Upper Bound
GIFTS IN COINS					
Roma with child(ren)	38	18.32	21.15	13.65	25.88
Roma alone	38	17.53	16.65	13.06	24.77
Autochthonous	109	6.56	7.72	5.49	7.99
GIFTS IN KIND OR NOTES					
Roma with child(ren)	13	53.54	61.01	33.20	100.55
Roma alone	8	88.00	61.42	48.81	203.83
Autochthonous	21	34.36	31.27	23.36	55.50

Table 4: Interval times (in minutes) for the gifts

To compare the mean interval time of Roma with child(ren) with Roma alone we use the following test-statistic for two independent exponential distributions

$$F = \frac{\overline{X}_1}{\overline{X}_2}.$$

Under the null-hypothesis that the population means of the two distributions are equal, F has a F-distribution with degrees of freedom $2n_1$ and $2n_2$, where $\overline{X}_1$ (respectively $\overline{X}_2$) denotes the sample mean of the first (respectively second) sample, and n_1 (respectively n_2) is the sample size of the first (respectively second) sample (Festinger 1943). We find that there is no significant difference in the mean value of the interval times between Roma with child(ren) and Roma alone (p-value = 0.85 for gifts in coins and p-value = 0.25 for gifts in kind or notes). This results in confidence intervals for Roma beggars (alone or with children) on the one hand and autochthonous beggars on the other hand, which can be found in table 5.

Interval times (in minutes)	N	Mean	St.dev.	95% confidence interval for mean	
				Lower Bound	Upper Bound
GIFTS IN COINS					
Roma	76	17.92	18.91	14.49	22.75
Autochthonous	109	6.56	7.72	5.49	7.99
GIFTS IN KIND OR NOTES					
Roma	21	66.67	62.03	46.70	116.49
Autochthonous	21	34.36	31.27	24.06	60.03

Table 5: Interval times (in minutes) for the gifts for Roma and autochthonous beggars

The F-test for comparing the mean interval time allows us to conclude that there is a significant difference between the Roma beggars and the autochthonous beggars. The p-value is $1.2{\times}10^{-11}$ for gifts in coins and 0.034 for gifts in kind or notes. From table 5 we can calculate the number of gifts per hour, depicted in the next table.

Number of gifts per hour	N	Mean	95% confidence interval for mean	
			Lower Bound	Upper Bound
GIFTS IN COINS				
Roma	76	3.35	2.64	4.14
Autochthon	109	9.14	7.51	10.93
GIFTS IN KIND OR NOTES				
Roma	21	0.90	0.56	1.32
Autochthon	21	1.75	1.08	2.57

Table 6: Number of gifts per hour

We combine the mean interval time between gifts and the mean value of a gift to find the mean income per hour. Therefore we use the method of Fieller to calculate the confidence interval of the ratio of two means (Fieller 1940; Motulsky 1995). In order to estimate the total income per hour, we combine the estimation for the income in coins and the income in kind or notes to calculate a confidence interval for the total income per hour. The method to calculate a confidence interval for the sum of two population means is very similar to the formula for the confidence interval for a difference between two population means.

	Mean	Stand. error	df	95% confidence interval for mean	
				Lower Bound	Upper Bound
GIFTS IN COINS					
Roma	2.60	0.356	223	2.01	3.47
Autochthon	7.10	0.863	256	5.61	9.11
GIFTS IN KIND OR NOTES					
Roma	1.34	0.377	48	0.76	2.57
Autochthon	2.61	0.731	48	1.48	4.98
TOTAL INCOME					
Roma	3.94	0.583		2.77	5.12
Autochthon	9.71	1.243		7.21	12.21

Table 7: Income (in €) per hour

Finally we attempt to estimate the income per day and per month. As explained before, we relied on the survey data in order to estimate the mean begging time per day, as depicted in the table below.

	N	Mean	St.dev.	95% confidence interval for mean	
				Lower Bound	Upper Bound
Roma with child(ren)	49	4.43	1.79	3.91	4.94
Roma alone	40	4.76	2.31	4.02	5.50

Autochthon	45	5.99	3.57	4.92	7.06

Table 8: self-reported mean begging time per day (in hours)

In order to combine the self-reported working time with the other data, we make the following assumptions. 90% of the reported begging time is assumed to be productive working time; the remaining 10% is invested in organization and preparation. In order to estimate the monthly income, we assumed a mean beggar works 20 days a month. The extrapolation from income per day to income per month is a purely theoretical one, based on the average working days for a full time employee. There is no proof whatsoever that the beggars in fact work the same amount of days, as begging is often hampered by rain, the cold or police actions. To find a confidence interval for the income per day we use a confidence interval for a product of two population means (Wold 1974).

	Mean	Stand. error	95% confidence interval for mean	
			Lower Bound	Upper Bound
ESTIMATED INCOME PER DAY				
Roma	16.26	2.523	11.18	21.33
Autochthon	52.35	8.183	35.90	68.81
ESTIMATED INCOME PER MONTH				
Roma	325.12	50.47	223.65	426.59
Autochthon	1047.10	163.66	718.04	1376.16

Table 9: Estimated income (in €) per day and per month

4.2. Hypotheses

The estimates in the previous section provide us with the basis to test the hypotheses. In the introduction of this paper we formulated four hypotheses:

1. Begging with children yields a higher return
2. Profitability of begging is especially high for migrated beggars
3. The profitability of begging is comparable to other criminal activities
4. Begging generates an income around the poverty line

First, the surplus value of begging with children seems to be inexistent. Because we didn't simulate begging with children in our quasi-experimental observations, the definitive falsification of this hypothesis is not possible, but the evidence does point in the direction of a falsification. Female Roma beggars with children do not receive more frequent gifts than Roma women begging alone. All the more, begging with children is not done for a longer time per day than begging alone. It is possible that under the equal income, there exist a complex set of mechanisms. Probably the presence of children arouses intense feelings from the passers-by. On the one hand, some people may be inclined to give more frequently to people begging accompanied by children. However, if such a mechanism exists, it probably is balanced by the contradictory feeling: some people refrain from giving *because of* the presence of children.

The second hypothesis refers to the alleged difference in income between migrated and autochthonous beggars. This hypothesis is based on the vision of political decision makers that 'organized begging' is closely linked to human trafficking. This assumption is conclusively dismissed by the estimates. The migrant beggars, predominantly female Roma, have a consistently lower productivity than the autochthonous beggars. Both in frequency and in mean value of the alms they receive, Roma come off worse. In general they also seem to

invest less time in their begging activity than autochthonous beggars. The latter difference may also be caused by two relevant observations: first, they usually have a family to take care of; second, while begging they seem to be hampered more often by the police or other security officers.

How can one account for the gap between the productivity of autochthonous and Roma beggars? There may be reasons involved originating from the 'demand' side of begging. The public in general may have a less favorable image of Roma beggars, due to the persistent stories about 'organized begging' and exploitation, or maybe even to a more general xenophobic distrust toward Roma (as argued in Butovskaya et al. 2004). Finally, the mere fact that there are more Roma than autochthonous beggars may lead to a lower income.

The third hypothesis aims to test an aspect of the general image that begging may be organized by criminal entrepreneurs in order to make illegal profits through the exploitation of beggars. A direct verification of this assumption would require considerable police resources. An indirect test is possible, however. We assume that criminal entrepreneurs in general seek profit maximizing opportunities. In order to be an attractive activity, exploitation of beggars should be able to yield considerable gross revenues. Therefore, we attempt to compare the gross revenues of begging with those of illegal or semi-illegal activities. After an analysis of the available literature, it was clear that only few reliable estimates exist of the revenues of illegal or semi-legal activities. Moffat and Peters (2004) published a detailed, recent and reliable estimate of the gross revenues of prostitutes in the UK. The mean price of an encounter was 55 £ in 1999 (60.38 £ or 87.61 € in 2006 prices); the mean time was 30 minutes. Prostitutes have a mean of 21 (window prostitution) to 25 (streetwalkers) encounters per week. If we compare the profitability of prostitution to the income of beggars, the comparison shows a massive difference. The income of beggars fluctuates between 4 and 13 percent of the gross revenue of prostitutes. This indicates that beggars' activities are not a serious candidate for criminal entrepreneurial strategy.

		95% confidence interval for mean	
	Mean	Lower Bound	Upper Bound
Roma	4.09%	2.82%	5.37%
Autochthon	13.18%	9.04%	17.33%

Table 10: Estimated income of beggars as % of the minimum income of prostitution

An alternative explanation for begging builds upon the idea that it is an informal street level economic activity that is primarily chosen by people with very little alternative opportunities. To be consistent with this hypothesis of begging as a survival activity, the yields should not exceed the lower revenues of formal work, or even stay below it. We chose as a basis of comparison the poverty line that refers to the overall distribution, often applied in the European Union. A person is poor whenever his income is lower than 60% of the median income[11] (Boarini and d'Ercole 2006; Ruggeri Laderchi, Saith, and Stewart 2003). The question is whether begging from this perspective may serve as a means to evade poverty. The general impression is that it is not.

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[11]   At the time of our data collection, the 60% poverty line for an individual in Belgium amounted to a monthly income of 822 € per month.

	Mean	95% confidence interval for mean	
		Lower Bound	Upper Bound
Roma alone	39.55%	27.21%	51.90%
Autochthon	127.38%	87.35%	167.42%

Table 11: Estimated income of beggars as proportion of the 60 %-poverty line

Roma beggars stay far below the poverty line. The depth of their poverty is even more serious than illustrated here, as we based our comparison on the poverty line of a single person household. This is a realist option for the autochthonous beggars. The Roma on the other hand often have minor children to take care of (65.5% of the female Roma beggars). Moreover, they usually depend on the begging revenues as their only income.

The situation of the autochthonous beggars however, does look different. Probably most autochthonous beggars are able to evade poverty due to their income from begging. In addition, a majority of this latter group (72.3%) enjoys some welfare benefit in addition to their income from begging.

5. Conclusion

This paper primarily attempts to develop a methodology to measure the yields of begging in a more reliable way than available in the social-scientific literature today. Basically, the strategy is based upon a careful assessment of the available methods to estimate the income from beggars. Two strategies were found in the literature: observation and self-reports. Self-reports have the apparent weakness that they are very sensitive to socially desirable answering and non-response. Observation may overcome this weakness, but is limited in its scope of data that one can collect; only the frequency of gifts can be observed. In our fieldwork however, we noted that the value of gifts in kind and in notes can also be observed. The most frequent type of gifts however is gifts in coins. In order to overcome the inadequacies associated with both methods, we develop a research design based on three forms of data collection: observation, self-reports and quasi-experimental observations.

These data allow us to test the hypotheses concerning the income of beggars. The hypotheses are based on three distinct sources of inspiration: the literature on informal work as a survival activity, the popular social myths about the nature of beggars and begging, and the assumptions underpinning recent legislation that criminalizes some forms of begging. The informal economy literature is radically antithetical to the social myths and recent legislation. The former hypothesizes that the yields of begging will be rather low, probably under or around the poverty line. The popular myths on the other hand, assume that begging often is a fraudulent activity, organized by criminal groups, with high profits. The recent legislation in France and Belgium partially builds upon these assumptions, assuming that some criminal groups coerce people into begging, often trafficked migrants, and that these criminal groups also make use of children accompanying the beggars in order to "evoke pity of the passer-by".

We estimate the income of three groups in the population of beggars: autochthonous male beggars, migrant women alone and with children. In Brussels, almost all of the migrant beggars are Roma. Together, these three groups constitute the large majority of beggars in Brussels. We tested hypotheses that the begging yields an income above the poverty line, brings in earnings comparable to prostitution, and leads to a higher income for the migrant beggars and for beggars accompanied by children. All of these hypotheses were rejected.

Only the first hypothesis was inconclusive: for autochthonous beggars, the possibility exists to evade poverty with their activity. However, the 'usual suspects' of criminal forms of begging, migrant beggars, clearly are not able to evade poverty by begging.

In short, the assumptions underpinning both popular myths and the criminalization of some sorts of begging have no empirical ground. They therefore can definitely be categorized as 'myths'. On the other hand, expectations based on the social-scientific literature on street level informal economies are confirmed.

Bibliography

Adler, Michael, Catherine Bromley, and Michael Rosie
    2000   "Begging as a challenge to the welfare state." In British Social Attitudes: the 17th Report. Focussing on diversity, ed. Roger Jowell, John Curtice, Alison Park, Katharina Thomson, Lindsey Jarvis, Catherine Bromley, and Nina Stratford. 209-237. London: Sage.

Boarini, Romina, and Marco Mira d'Ercole
    2006   "Measures of material deprivation in OECD countries." In OECD social, employment and migration working papers. 68. Paris: OECD.

Bose, Rohit, and Stephen W. Hwang
    2002   "Income and spending patterns among panhandlers." Canadian Medical Association Journal 167:477-479.

Butovskaya, Marina, Frank Kemp, Ivan Diakonov, and Alexey Smirnov
    2004   "Urban begging and ethnic nepotism in Russia: an ethological pilot study." In Welfare, ethnicity and altruism. New findings and evolutionary theory, ed. Frank Salter. 2752. London: Frank Cass.

Collins, Damian, and Nicholas Blomley
    2003   "Private Needs and Public Space: Politics, Poverty, and Anti-Panhandling By-Laws in Canadian Cities." In New Perspectives on the Public–Private Divide, ed. Law Commission of Canada. 191. Vancouver/Toronto: UBC Press.

Danczuk, Simon
    2000   "Walk on by. Begging, street drinking and the giving age." 25. London: Crisis.

De Swaan, A.
    1987   "Armenzorg als collectieve actie: naar een sociogenetisch paradigma van het collectiviseringsproces." In Economie, sociologie en psychologie. Visies op integratie, ed. P. Keizer, and J. Soeters. 103-132. Assen: Van Gorcum.

De Swaan, Abram
    1990   Zorg en de staat. Welzijn, onderwijs en gezondheidszorg in Europa en de Verenigde Staten in de nieuwe tijd. Amsterdam: Bert Bakker.

Dean, Hartley, and Keir Gale
    1999   "Begging and the contradicitons of citizenship." In Begging questions. Street-level economic activity and social policy failure, ed. Hartley Dean. 13-26. Bristol: Policy Press.

Donovan, Michael G.
    2008   "Informal cities and the contestation of public space: the case of Bogota's street vendors, 1988-2003." Urban Studies 45:29-51.

Elias, Norbert
    1984   Wat is sociologie? Utrecht: Het Spectrum.

Ellickson, Robert C.
    1996   "Controlling chronic misconduct in city spaces: of panhandlers, skid rows, and public-space zoning." Yale Law Journal 105:1165-1248.

Erskine, Angus, and Ian McIntosh
    1999   "Why begging offends: historical perspectives and continuities." In Begging questions. Street-level economic activity and social policy failure, ed. Hartley Dean. 27-42. Bristol: Policy Press.

Feige, Edgar L.
    1990   "Defining and estimating underground and informal economies: the new institutional economics approach." World development 18:989-1002.

Festinger, Leon
    1943   "An exact test of significance for means of samples drawn from populations with an exponential frequency distribution." Psychometrika 8:153-160.

Fieller, E.C.
    1940   "The biological standardization of insulin." Journal of the Royal Statistical Society 8:1-64.

Fierens, Jacques
    2004   "La répression de la mendicité en 2004." Journal des tribunaux:543–544.

Fitzpatrick, Suzanne, and Anwen Jones
    2005   "Pursuing social justice or social cohesion? Coercion in street homelessness policies in England." Journal of social policy 34:389-406.

Fitzpatrick, Suzanne, and Catherine Kennedy
    2000   Getting by. Begging, rough sleeping and *The Big Issue* in Glasgow and Edinburgh. Bristol: The Policy Press.

Friedman, Eric, Simon Johnson, Daniel Kaufmann, and Pablo Zoido-Lobaton
    2000   "Dodging the grabbing hand: the determinants of unofficial activity in 69 countries." Journal of Public Economics:459–493.

Geremek, Bronislaw
    1980   Truands et misérables dans l'Europe moderne (1350-1600). Paris: Gallimard.

Hermer, Joe
    2006   Policing Compassion. Begging, Law and Power in Public Spaces. Oxford: Hart Publishing.

Hershkoff, Helen, and Adam S. Cohen
    1991   "Begging to differ: the First Amendment and the right to beg." Harvard Law Review 104:896-916.

Hopkins Burke, Roger
    2000   "The regulation of begging and vagrancy: a critical discussion." Crime Prevention and Community Safety: an International Journal:43-52.

Jamar, Nadine, and Patrick Herbots
    2006   "Bedelarij en exploitatie." Nieuw Juridisch Weekblad:98-109.

Kahl, Sigrun
    2005   "The Religious Roots of Modern Poverty Policy: Catholic, Lutheran, and Reformed Protestant Traditions Compared." Archives Européennes de Sociologie 46:91-126.

Lankenau, S.E.
    1999   "Stronger than dirt. Public humiliation and status enhancement among panhandlers." Journal of contemporary ethnography 28:288-318.

Lu, Hanchao
    1999   "Becoming urban: *mendicancy* and vagrants in modern Shanghai." Journal of Social History 33?

Matheeusen, Constant
    1998   "Vives et la problématique sociale de son temps. Son attitude envers la mendicité et le vagabondage." In Luis Vives y el humanismo Europeo, ed. F.J. Fdez Nieto, A. Melero, and A. Mestre. 107-115. València: Universitat de València.

McIntosh, Ian, and Angus Erskine
    1999   "'I feel rotten. I do, I feel rotten': exploring the begging encounter." In Begging questions. Street-level economic activity and social policy failure, ed. Hartley Dean. 183-202. Bristol: Policy Press.

Melrose, Margaret
    1999   "Word from the street: the perils and pains of researching begging." In Begging questions. Street-level economic activity and social policy failure, ed. Hartley Dean. 143-160. Bristol: Policy Press.

Mitchell, Don
    2005   "The S.U.V. model of citizenship: bubbles, buffer zones, and the ''purely atomic'' individual." Political Geography 24:77-100.

Moffatt, Peter G., and Simon A. Peters
    2004   "Pricing personal services: an empirical study of earnings in the UK prostitution industry." Scottish Journal of Political Economy 51:675-690.

Motulsky, Harvey
    1995   Intuitive biostatistics. Oxford: Oxford University Press.

Murdoch, Alison
    1994   "We are human too. A study of people who beg." 35. London: Crisis.

O' Flaherty, Brendan
    1996   Making room. The economics of homelessness. Cambridge: Harvard University Press.

Portes, Alejandro, Manuel Castells, and Lauren A. Benton
    1989   "Conclusion: the policy implications of informality." In The informal economy. Studies in advanced and less developed countries, ed. Alejandro Portes, Manuel Castells, and Lauren A. Benton. 298-311. Baltimore: John Hopkins University Press.

Portes, Alejandro, and William Haller
    2005   "The informal economy." In The handbook of economic sociology, ed. Neil J. Smelser, and Richard Swedberg. 403-425. Princeton: Princeton University Press.

Renooy, Piet H., Staffan Ivarsson, Olga van der Wusten-Gritsai, and Remco Meijer

2004   "Undeclared work in an enlarged Union. An analysis of undeclared work: an in-depth study of specific items." 240. Brussels: European Commission - DG V.

Rosser, J. Barkley Jr., Marina V. Rosser, and Ehsan Ahmed
   2000   "Income inequality and the informal economy in transition economies." Journal of Comparative Economics 28:156-171.

Ruggeri Laderchi, Caterina, Ruhi Saith, and Frances Stewart
   2003   "Does it matter that we do not agree on the definition of poverty? A comparison of four approaches." Oxford Development Studies 31:243-274.

Schneider, Friedrich
   2007   "Shadow economies and corruption all over the world: new estimates for 145 countries." 63. Linz: Johannes Kepler University.

Sifaneck, Stephen J., and Alan Neaigus
   2001   "The ethnographic accessing, sampling and screening of hidden population: heroin sniffers in New York City." Addiction Research and Theory 9:519-543.

Smith, Patricia K.
   2005   "The economics of anti-begging regulations." American Journal of Economics and Sociology 64:549-577.

Thacher, David
   2004   "Order maintenance reconsidered: moving beyond strong causal reasoning." The journal of criminal law and criminology 94:381-414.

Trejos Solorzano, Juan Diego, and Miguel Del Cid
   2003   "Decent work and the informal economy in Central America." In Working Paper, ed. Policy Integration Department. 81. Geneva: International Labour Office.

Van Eck, Robert, and Brugt Kazemier
   1988   "Features of the hidden economy in the Netherlands." Review of Income and Wealth 34:251-273.

Venkatesh, Sudhir Alladi
   2006   Off the books. The underground economy of the urban poor. Cambridge: Harvard University Press.

Wardhaugh, Julia, and Jane Jones
   1999   "Begging in time and space: 'shadow work' and the rural context." In Begging questions. Street-level economic activity and social policy failure, ed. Hartley Dean. 101-119. Bristol: Policy Press.

Williams, Colin C.
   2004   "Tackling undeclared work in advanced economies. Towards an evidence-based public policy approach." Policy Studies 25:243-258.

Williams, Colin C., and Jan Windebank
   2002   "The uneven geographies of informal economic activities: a case study of two British cities." Work, employment & society 16:231-250.

Wold, Svante
   1974   "Confidence limits on the product of two uncertain numbers." Analytical Chemistry 46:1614.

Woodbridge, Linda
   2002   "Impostors, Monsters, and Spies: What Rogue Literature Can Tell us about Early Modern Subjectivity." Early Modern Literature Studies 9:1-11.