The 'Prostitution Trap': Trans-forming the Economic Understanding of Prostitution

INTRODUCTION

In several European countries, the political debate around prostitution explicitly or implicitly draws a clear distinction between coerced prostitution, often as a consequence of human trafficking, modern-day slavery or other forms of inhuman and degrading treatment, and the cases in which prostitution may be considered as a free choice of the individual.[1] In the economic debate, the bulk of empirical studies on prostitution analyze "consumers' demand" for such trade (see e.g. Cameron Samuel and Alan Collins 2003; Della Giusta Marina et al. 2009a). Theoretical studies that investigate the supply side usually focus on "pull factors" that may attract an individual into this activity, often framing the choice in terms of a trade-off between the prospective income and the utility-reducing social stigma attached to prostitution: see e.g. Della Giusta Marina et al. (2009b), Edlund Lena and Evelyn Korn (2002). Thus, these economic models are best suit to analyze those segments of the sex market in which prostitution may, at least in first approximation, be considered as a rational choice. On the other hand, empirical studies on the supply side, such as Di Tommaso Maria et al. (2009), mostly concern cases of coerced prostitution, often analyzing samples of trafficked men and women (few exceptions, of empirical analyses of freewill prostitution, are DeRiviere Linda 2006, and studies on the economic determinants of unprotected sex practices in the sex market: e.g. Bertozzi Stefano et al. 2005; Rao Vijayendra 2003).

In this study we attempt at empirically investigating the determinants of the supply side of prostitution. To do so, we examine a relevant example of how the dichotomy between coerced and freewill prostitution may be misleading (a similar argument, concerning the blurred boundaries between migration and human trafficking was made on this journal by Rao Smriti and Christina Presenti 2012). We focus on a very stigmatized and discriminated population, i.e. transsexual and transgender people, henceforth "trans" people, and we show that "push factors" into prostitution may be so strong as to effectively make pull factors, even if present, of smaller practical relevance (Vanwesenbeeck Ine 2013).

In terms of the economic models both à la Della Giusta *et al*. (2009b) or Edlund and Korn (2002), it may be said that oftentimes the budget constraint alone may determine an individual's choice, irrespective of his or her preferences or utility. Such phenomenon is documented here for a marginalized and often hidden population, thus its relevance for society at large will need to be investigated in further studies. However, especially for men and women victims of discrimination and/or at a high risk of poverty, the push factors into

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ENDNOTES

[1] See for example the *Report on sexual exploitation and prostitution and its impact on gender equality* (2013/2103(INI)) by the Committee on Women's Rights and Gender Equality, European Parliament, Plenary Sitting.

prostitution may prove similarly binding too, effectively creating a group of people who have fallen (or are at risk of falling) into a "prostitution trap".

SEX WORK AND TRANS PEOPLE

Prostitution is a form of work and exchange mostly disregarded by the economists, in spite of the remarkable size of the global sex industry and its contribution to at least some countries' national income. The share of adults that reported ever having sold sex for money is estimated to be around 1%, with no significant gender differences (Vanwesenbeeck 2013; a 3% share is reported by Bakker Floor and Ine Vanwesenbeeck 2006 for the Netherlands). Yet, the sex work industry is still largely dominated by women, accounting for 87% of sex workers according to a recent survey of the "prostitution scene" in 25 EU countries (TAMPEP 2009). In a report for the ILO, Lim Lin (1998) estimated the contribution of the sex industry to the gross domestic product of four South Eastern Asian countries (Indonesia, Malaysia, Philippines and Thailand) in a range between 2% and 14%.

In the past couple of decades, an emerging stream of empirical and theoretical contributions improved upon the early literature on the sex market (for an early review see Reynolds Hellen 1986) by focusing on mechanisms of price determination (Moffat Peter and Simon Peters 2001, Edlund and Korn 2002, and Cameron Samuel 2002), or estimating the "risk premium" attached to unprotected sex (Rao et al. 2003, and Gertler Paul et al. 2003), the determinants of the demand and supply of prostitution (Cameron and Collins 2003, and Cameron Samuel *et al*. 1999), and the role of the urban economy on sexual consumption (Collins Alan, 2004).

Reputational effects in the sex market have been introduced by Della Giusta *et al*. (2008, 2009a, 2009b) both in terms of utility stemming from positive social evaluation and welfare costs imposed by social sanctions. Selling and demanding prostitution are associated to stigma and result in a loss of reputation that can also affect a sex worker's access to alternative earning opportunities. The supply of prostitution thus reduces both leisure and social reputation, and these losses that must be compensated for by a monetary reward, i.e. income as the main pull factor. The model predicts that supply will be positively correlated with the capacity for reputational losses (the larger, the more prostitution can be sold without compromising one's reputation) and with fewer alternative working opportunities. Accordingly, unequal income distribution explains at least part of the current gender imbalance in sex demand and supply.

The gendered nature of stigma and of the associated coping strategies has not been ignored in the non-economic literature, since women face a more harmful experience of sex work and identity management (for a review see Vanwesenbeeck 2013).

Emerging new evidence suggests that stigma also plays a role as a push factor into sex work. Early stigma, e.g. from belonging to a sexual minority (especially for women) or being gay is reported to facilitate the decision to become a sex worker (Smith Michael *et al.* 2012 for male escorts).

Stigmatisation seems to precede the supply of prostitution also in the case of trans people. The trans segment may indeed represent a significant portion of the sex market: in most European countries trans people are estimated to constitute around 5% of sex workers, and in

some countries, such as France, Greece, Luxembourg, Belgium and Italy, even between 15% and 25% (TAMPEP 2009).

Discrimination against trans people has been amply documented in the literature. Transphobia[2] manifests itself through hate crimes (in a especially violent way, according to Stotzer Rebecca 2008), victimization related to gender identity (harassment, verbal abuse, assault with weapons, and sexual assaults are reported by Lombardi Emilia et al. 2001), discriminatory experiences in the family (such as physical violence and open hostility: Koken Juline et al. 2009), and both overt and subtle forms of discrimination (Nadal Kevin et al. 2012). Evidence of labour market discrimination encompasses hiring and dismissal processes, as well as career advancement (National Center for Transgender Equality and the National Gay and Lesbian Task Force 2009, Lombardi et al. 2001). Negative consequences in terms of mental health (Nadal et al. 2012) and poverty (National Center for Transgender Equality and the National Gay and Lesbian Task Force 2009) have been documented, as well as engagement in the sex market as a consequence of such discrimination (Nadal Kevin et al. 2014). Thus, field research in Brasil identified a strong correlation between transgender identity and sex work (Kullick Don 1998), as well as the predisposing role played by social stigma for *travestis* in São Paolo in the entrance and persistence in the sex market (Garcia Marcos and Yvette Lehman 2001).

To our knowledge, apart from the medical field (for example examining HIV prevalence: Stefan Baral et al. 2013), ours is the first quantitative study on the trans population in Italy.[3] As shown in what follows, our dataset of a sample of Italian transgender people provides a first confirmation that also for industrialized countries social stigma and lack of employment opportunities act as push factors into the sex market.

SAMPLE DESIGN

As mentioned, while qualitative studies have been common in the social sciences, quantitative analyses on the life experiences of trans individuals have mostly been carried out in the health and life sciences (for quantitative studies in the social sciences, see Law Charlie *et al.*, 2011; Schilt Kristen and Matthew Wiswall, 2008). Indeed, among the main challenges in quantitatively studying this population are its very small size and its marginalization from society, which induce many trans people to refrain from taking part in surveys and interviews, as well as conflicting views and lack of consensus on concepts and definitions relating to gender nonconformity – both among scholars and trans people themselves (Christensen Kimberly, 2001).

Concerning the mentioned statistical challenges, the most relevant implication is the difficulty of collecting data through representative samples (Botti Fabrizio and Carlo D'Ippoliti 2014).

[2] Discrimination towards trans people is often equivalently denominated as "transphobia" or "an emotional disgust toward individuals who do not conform to society's gender expectations" (Darryl Hill and Brian Willoughby 2005).

[3] One study investigated a specific segment of the trans population in Italy, namely mainly transsexual people seeking help by a local trans NGO in the Northern city of Bologna in 1997 (ISELT, 2004), while most medical studies analyze surveys or registries of transsexual people undergoing a process of sex reassignment within specialized health centers (see for example Imbimbo Ciro et al. 2009).

On the one hand, if such samples were to be obtained through random surveys of the whole population, the small size of the trans population implies that very large surveys would have to be conducted in order to only gather very few observations. On the other hand, methods to directly survey the relevant population while retaining a representative character of the sample are still difficult to develop and implement (compare Volz Erik and Douglas Heckathorn 2008) and, in the specific case of hidden populations, face the mentioned obstacle of diffidence on the side of stigmatized and discriminated people. For these reasons, we use data from a non-random sample, collecting information on trans individuals living in Southern Italy. The sample was collected through snowball sampling during 2010, within a project on sexual orientation and gender identity discrimination in the four Italian "Convergence Regions" (i.e. those exhibiting a per-capita income lower than 75% of the European average), financed by the European Social Fund. All stages of the survey and sampling benefited from the active support of local LGBT and trans associations (for more details on the study and the methodology of the survey see D'Ippoliti Carlo and Alexander Schuster 2011a).

Concerning the second mentioned difficulty, that of conceptualizing and defining gender nonconformity, it should be noted that in this field more than elsewhere classification and definitions carry strong political connotations, as well as relevant consequences for trans people's life and wellbeing, and definitions may change in different times and places (Meadow Tey 2010). In the Italian context, it is convenient to distinguish between the experience, self-identification and social life of transgender individuals, i.e. those who do not identify with either gender, and those of transsexual individuals, i.e. those who identify with the gender opposite to their biological sex. Furthermore, transsexual persons vary in the kind and stage of their transition from one sex to the other. In any case, the distinction between transsexual and transgender people is based on individuals' gender rather than their sex. Thus, we will refer to *MtF transsexual* individuals to denote those born male who identify as a woman, regardless of the stage of sex reassignment in which they are, *FtM transsexual* individuals are those born female who identify as man, and *transgender* (*TG*) denotes people who do not identify as either man or woman, irrespective of their biological sex.[4]

Qualitative analyses and a pilot study (documented in D'Ippoliti and Schuster, 2011a) indicate that the trans population in Italy is sharply divided into two subgroups that not only exhibit different life experiences and approaches to gender nonconformity, but they are also often socially and politically disconnected, if not outright hostile to each other. On the one hand are trans people, mostly Italian and often transsexual, who conduct a lifestyle not disconnected and not totally dissimilar from the rest of the population. Indeed, they are often the objects of discrimination precisely when and because they try to integrate and live 'typical' Italian lives (e.g. when renting an apartment, looking for a job, etc.), for they show that traditional gender roles are not necessarily an immutable aspect of society.

On the other hand, a relatively large population of often immigrant transgender people are present in Italy as street sex workers. There are founded suspicions that some of these people may be victims of international human trafficking (often originating from Latin America), and

[4] In our sample the attribution of a specific biological sex to each individual is possible because we do not have observations of intersex people.

anecdotal evidence suggests that a good number of them consider themselves to be only temporarily in Italy, and often only temporarily transgender (D'Ippoliti Carlo and Alexander Schuster, 2011b). Qualitative analysis suggests that the experience and self-identification of this population are very different and hardly comparable with those of the rest of the trans population and of Italian mainstream society. They suffer from extreme social exclusion and often violations of basic human rights (not dissimilar from what found in other countries: Garcia Marcos and Yvette Lehman, 2011) but, while they may constitute a substantial share of the Italian sex market, in our view such issues require a specific further study. For reasons of consistency and in order to maintain a certain comparability of our sample with the rest of the population, we excluded face-to-face interviews "in the streets" as a method of sampling, and rather designed a snowball sampling strategy with the aim of including only those trans people who may considered to be part, even if marginalized, of mainstream society. To do so, we sampled trans people only that could be reached through conventional channels such as word of mouth or in commercial and social places attended by LGBT people.

Interviews were conducted anonymously through the filling in of a paper questionnaire. Individuals were asked to join a group session in which the questionnaire and the whole research were thoroughly explained. Then, each person's completed questionnaire was materially mixed with the all the others participants' ones, in order to visibly convey the message that it would be impossible for anyone involved in the research to trace back any questionnaire to a specific person (this information was repeatedly stressed before the filling in of the questionnaires). To further improve trust between the participants and researchers, all interviewers were recruited among local LGBT and trans associations.

MAIN CHARACTERISTICS OF THE SAMPLE

Composed of 108 observations (106 complete questionnaires), our sample is presumably large with respect to the target population. As a matter of fact, estimates of the incidence of transgenderism and transsexualism significantly vary according to the methodology and definitions adopted, as well as the time and place of investigation. Estimates for a European Mediterranean country may range between one MtF transsexual person every 10,000 people and 1 every 30,000; roughly 1/100,000 FtM transsexual people; and roughly 1/4,000 transgender people.[5] Thus, our sample may comprise between 2% and 3% of the target population, or possibly more, if taking into account that both the social milieu and the existence of specialized health centers often induce trans people in Southern Italy to migrate to the more developed Central and Northern Regions (D'Ippoliti and Schuster, 2011a).

Even though our sample was designed to exclude street sex workers, as mentioned in the previous section, it emerges that prostitution is a relatively common activity among trans people.[6] In the questionnaire, there were no specific questions concerning prostitution, but

[5] These values refer to estimates of the incidence of gender identity disorder (or gender dysphoria) according to DSM-5, the *Diagnostic and Statistical Manual of Mental Disorders* (DSM) published by the American Psychiatric Association. It is worth recalling that these values mainly refer to the USA, while for example De Cuypere *et al*. (1985) estimate to be there 1/13,000 MtF and 1/33,800 FtM people in Belgium, or Tsoi (1988) even reports of 1/2,900 MtF and 1/8,300 FtM people in Singapore.

[6] Freewill prostitution in Italy is almost ignored by legislation. According to Italian law n. 78/1958 ("Legge Merlin"), prostitution is allowed only in an individual and non-organized form, without any obligation to pay

rather this activity was listed among the several possible employments of the person (multiple answers were allowed). Indeed, starting from May 2009, the Italian political debate became dominated by allegations that Prime Minister Silvio Berlusconi regularly hosted parties with (occasionally underage) prostitutes. The then majority conservative party reacted both denying the accusations as well as trying to reduce the social stigma attached to prostitution. Part of such large-scale communication strategy was the systematic use of a less value-ridden term than prostitute, namely "escort". Exploiting this situation, when administering the survey we decided to use the same term (as mentioned, "escort" being simply listed among the other possible occupations in the formal labor market) in order to minimize any possible feeling of stigma on the side of respondents.[7] In what follows, we separately summarize the specific characteristics of trans sex workers (16% of the sample) in terms of demographic and socio-economic indicators and wellbeing.

[*Table 1* around here]

As shown in Table 1, the average age of the sample is roughly 35 years old for both sex workers and the rest of the sample (minimum age 18, maximum 67). Differences in gender identity between sex workers and the rest of trans population are on the whole not statistically significant. As discussed in D'Ippoliti and Schuster (2011b), for sex workers the conclusion of their transition, with sex reassignment surgery (SRS) and the final reattribution of the person's sex (usually as a woman, since most trans sex workers are MtF), may produce a loss in income due to the high demand for transgender and transsexual prostitutes. In our sample, we do not find a smaller proportion of post-SRS sex workers, but indeed sex workers are overrepresented among respondents that identify themselves as transsexual people *before* or at the beginning of a sex reassignment transition, whereas in the rest of the sample a greater number of people identify as transgender. Thus, while roughly one fifth of the whole sample does not express a wish to conclude their transition to the other sex, being comfortable somewhere in between, sex workers are more likely to perceive their status as temporary. Since we only observe a cross-section of individuals, further studies are required in order to understand if practicing prostitution significantly lengthens or delays such transition, beyond a person's wishes, due to the mentioned monetary incentives.
The geographical distribution of our sample between the four Regions under study roughly corresponds to the distribution of the Italian population in the same Regions, thus possibly indicating that migration of trans people mostly concerns South-North trajectories, with little movements between the Convergence Objective Regions. As shown in Table 1, more than 1/3 of respondents (i.e. more than the population average in the same Regions) live in urban areas of less than 50,000 inhabitants. Thus, we do not find evidence of internal migration towards larger cities, where a more progressive social attitude is often found (Botti and D'Ippoliti

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taxes on revenues. Exploitation and trafficking are forbidden (2 to 6 years of detention) as well as recruitment and facilitation of prostitution. Accordingly, and due to the sample design, we may assume that most sex workers in our sample are "call girls".

[7] Even though there is no clear distinction between the two terms in everyday use, it may be the case that many Italian people would fell "escort" refers most properly to higher income call girls, rather then streetwalkers, but as mentioned above the latter would probably be excluded from our survey by sample design.

2014). However, such migration concerns sex workers, the near totality of which (94%) lives in larger cities.
The vast majority of our sample is composed of single persons, with no significant differences between sex workers and the rest of the sample. 8 individuals have children (none among sex workers), but 12% of sex workers and 20% of the rest live with their unmarried partner. Less than one third of the sample is in a stable emotional relationship, and surprisingly the length of the relationships is significantly higher for sex workers. As a consequence of these trends, only a minority of the sample lives alone, with roughly one third living with the family of origin, and roughly 30% with their partner or with friends.

[*Fig 1* around here]

The social curse of trans people, of being a marginalized and discriminated population, is evident in our sample. Only 14% of respondents declare not to have experienced discrimination in the two years prior to the interview. Respondents were asked to report in a scale from 1 (minimum) to 10 (maximum) their personal experiences of discrimination in the two years prior to the interview in terms of frequency and severity of the episodes. As shown in Figure 1, the labor market, the healthcare sector and the public administration are the contexts in which discrimination is denounced as more frequent and/or more relevant. Sex workers denounce more frequent and more severe discrimination both in hiring and on the job (potentially leading to firing) and less frequent and less severe discrimination from family members and relatives. Except for family contexts, sex workers denounce a greater severity of discrimination in all fields.
The most frequent episodes of discrimination reported are: insults, derision and violations of one's privacy. Worryingly frequent too appear to be physical violence (suffered by 24% of respondents in the previous two years), sexual harassment (18%) and sexual assaults (8%). The majority of offenders are unknown to the victims, but 34% of episodes of discrimination have been perpetrated by relatives of the victim, 31% by civil servants and even 23% by law enforcement officers. Significantly less frequent are reported episodes of discrimination by market actors such as clients, service providers, employers or landlords. Sex workers appear to be especially at risk in contexts potentially related to their activity, i.e. in their contacts with strangers, clients, healthcare operators and, unfortunately, even law enforcement officers.

[*Fig 2* around here]

Sex workers exhibit significantly lower educational attainments than the rest of the sample, and their household wealth (as proxied by real estate) is lower too. However, as shown in Table 2 sex workers do not lament a lower self-perceived health status, and they even declare a higher income than the rest of the sample. Since in the Italian context income is considered a very sensitive question to ask in a survey (Neri Andrea and Roberta Zizza 2010), potentially even more than gender identity, given the involvement of local LGBT associations in our survey, we asked respondents about their household, rather than individual, monthly income, and at a separate stage we asked about their household weekly food expenditure. As shown in

Table 2, a significant difference only emerges in the latter variable, but the two variables exhibit strong correlation and, when considering equivalent household resources, i.e. household income or food consumption divided by the number of adult members of the household, they produce similar results. For this reason, in what follows we only consider the more straightforward question on net household income.[8]

[*Tab. 2* around here]

When asked about their employment status, 16% of respondents define themselves as escorts. A similar share of the sample (17%) declares to be self-employed or member of a profession, while more than a quarter of trans individuals report to be either unemployed (13%) or inactive (14%): these values are broadly consistent with the literature on the social inclusion of trans people, described in the previous section.
When asked how did they find their current employment, one fourth of the sample signals the intervention of family members as relevant or fair, and one half mentions the intervention of friends or acquaintances (Table 3). By contrast, these social networks are indicated as relevant or at least present by 16% only of sex workers. This may signal a lack of social capital among sex workers, although such hypothesis partly runs counter the evidence of their frequent involvement in volunteering activities (such latter result is obviously influenced by the sampling design, in which LGBT and trans associations' involvement was ever present, but yet no significant differences emerge between sex workers and the rest of the sample).

[*Tab. 3* around here]

Finally, in Table 4 we report some indicators directly or indirectly related to trans people's agency. As shown in the Table, sex workers report to be significantly less likely to oppose to episodes of discrimination (several forms of opposition were presented to respondents, ranging from an instinctive immediate reaction to legal action, and respondents could select more than one option). Among those who requested help, sex workers are more likely to refer to lawyers and law enforcement officers, and less likely to ask friends. Since the gravity of the episodes of discrimination suffered by the individual was only assessed through a subjective scale (as shown in Figure 1), it is not clear if this result should be interpreted as a confirmation of the lower social capital of sex workers (who may have less friends to resort to) or as an indication of the enhanced violence or however illegality of the episodes of which they are victims.
Similarly significant is the clustering of respondents on the reasons for their current employment, with almost 90% of sex workers reporting that this is the only activity they have found, while for half of the rest of the sample their job corresponds to their studies, or is one they like. Not surprisingly, no respondent in the whole sample declared their current occupation to be "more tolerant" towards them.

[*Tab. 4* around here]

[8] Further results, employing food expenditure rather than income, are available from the authors upon request.

FALLING INTO PROSTITUTION

In light of the theoretical literature reviewed, an approach to modeling the determinants of the supply of prostitution may be to simultaneously estimate the determinants of being employed and of falling into prostitution. However, in our sample only two respondents declare to be employed in the formal market and practice prostitution and, also taking into account the relatively small sample size, simultaneous non-linear equations estimations are not feasible.[9] Thus, we first estimate the determinants of being employed in the formal market (henceforth employability) and of income, then we separately analyze the impact of these variables on a trans person's probability of being a sex worker. In order to account for the potential endogeneity of these variables, which may concern both employability and income, we compare the results of probit and instrumental variables (IV) probit models.

Table 5 shows the main determinants of such first-stage estimates of the employment and income of trans people. Following the literature on women's employment in Italy (on which see e.g. Cipollone and D'Ippoliti 2011; D'Ippoliti 2011), we extend the mainstream labor supply model to include, besides human capital, the following variables: social capital, self-perceived health conditions, unpaid housework burdens (proxied by living with a partner) and discrimination. Thus, our concept of employability in the subsequent IV estimation is wider than the European mainstream one, in which individual factors only are included, related to labor supply.

In addiction to such baseline estimation (reported in column I), for the sake of comparison Table 5 also reports the equations used to instrument employability in the following estimates of the probability of falling into prostitution (columns II and III, on which see below: as it is well known, the instrumental variables method requires that also all variables used in the main estimation be included in the regression of the instrumented variable too). Baseline estimates of the determinants of equivalent household income employ the same variables used for employment, as well as age (also as a quadratic term), in order to account for the traditional seniority-related earning structure of the Italian economy, household size (to account for scale economies in consumption, given that our measure of income is defined at the household level), and a measure of household wealth (proxied by home ownership). Similarly to employment, besides the baseline equation (column IV), two further estimates are reported (columns V and VI), exhibiting the estimates of income as instrumented in the following instrumental variables probit model of the supply of prostitution.

Overall the two models, of employment and income, emerge as good predictors of the variables under study, as evidenced by the results of the tests of the joint statistical significance of all coefficients, and especially from their ability to correctly classify between 72% and 77% of the observations, concerning the employment status (13 respondents are not included because they are not of working age, studying or retired), and to explain around 56% or more of the observed variance, for household incomes.

[9] For example, a bi-probit estimation is not feasible because working as a prostitute perfectly predicts not working in the formal labor market. Further information available from the authors upon request.

As shown in Table 5, human capital exerts a significantly positive impact on employment: vocational training increases a trans person's probability of being employed by between 21% and almost 25%, depending on the specification, whereas having completed upper secondary or tertiary education (i.e. having studied for 13 years or more) increases the probability of being in employment by between 17% and 30%. Social capital has a smaller though significant impact, between +14.5% and +16%, while bad self-perceived health conditions and cohabiting with one's partner do not appear to significantly affect employment.

[Table 5 around here; full page]

To investigate the potential impact of discrimination on employment, we employ two sets of variables among those described in the previous section. Concerning the subjective ones (not included in the baseline estimation) we include two dummy variables: one denoting those individuals who lamented "very frequent" (value 9) or "daily" (value 10) experiences of hiring discrimination; and the other identifying those who answer that their current employment is the only job they have found. As shown in the table, the former variable is found to decrease the probability of being employed by more than 44% (i.e. it more than compensates the average impact of human capital), whereas the small impact of the latter variable is not statistically significant. Among the objective indicators of potential discrimination, we grouped trans people into four categories: transsexual before sex reassignment transition, transsexual in transition, transsexual after sex reassignment surgery (SRS, considered as the final stage of the visible part of transition), and transgender (i.e. not interested in ever completing a transition to the other sex). These different forms of gender identity may denote different risks of discrimination because they may be associated with different forms of gender expression and most of all different capacity to hide one's identity, when need to. As shown in the table, no significant differences emerge among transsexual people (reference group is transsexual people, before transition), whereas in the baseline scenario transgender people seem to enjoy a certain labor market advantage over transsexuals (+26% probability of being employed).

Concerning the estimates of equivalent household income, it is relevant to underline that for trans people we do not find any impact of human capital, as well as of past experiences of discrimination. Age is confirmed as the most relevant predictor of income (in the usual non-linear shape), and a significant negative sign is associated to household size.

Our model of the determinants of being a sex worker is reported in Tables 6 and 7. We single out income as the main pull factor into prostitution, and the two measures of discrimination explained above as proxies for the push factors. In addiction, among the push factors we include a measure of individuals' agency (of which we expect a negative sign), proxied by the decision to oppose to the episodes of discrimination, and an estimate of the person's employability, measured by the predicted probability of being employed according to the baseline model of Table 5, column I (it thus includes human and social capital, objective potential determinants of discrimination, cohabitation and health status). As opposed to being employed, our measure of employability is defined for the whole sample and is a continuous variable taking on values comprised between 0 and 1.

Considering the descriptive statistics presented in the previous section, both employability and income are suspect of being endogenous variables in a regression on the determinants of being a sex worker. However, due to computational reasons related to small sample size we were unable to estimate an instrumental variables (IV) probit model with both endogenous regressors simultaneously. For this reason, in table 7 we report various IV probit estimates, each one with one endogenous variable and the other assumed as exogenous or removed from the estimation, as well as a linear probability model (LMP) GMM estimation, which has lower computational requirements, in which both variables are assumed to be endogenous.[10] As shown in the table, Wald tests of the endogeneity of these variables (based on the GMM C statistic for the LPM, and on the estimated correlation between the residuals of the first and second stage regressions, $\hat{\rho}$, for the IV probit models) lead us to reject the hypothesis of endogeneity of income, of employability and of both. The same results are obtained applying a generalized Hausman specification test of the equality of the estimated coefficients.[11] Indeed, a comparison of Tables 6 and 7 does not reveal major differences in the estimated sign, size and statistical significance of the coefficients both of the exogenous and the (potentially) endogenous variables.

All models exhibit a very good predictive ability (both positive and negative), allowing us to correctly classify between 89% and 95% of all observations. As predicted by economic models à la Della Giusta et al. 2009b, income has a significantly positive impact, confirming that trans sex workers earn more than the average trans person, and thus prospective income may indeed prove as a pull factor into prostitution. The estimated coefficient is not very large, with a 500€ per month increase in income implying a higher probability of being a sex worker between 5% and 6%. However, it should be recalled that we only measure equivalent household income, which is thus an imperfect proxy of the prospective individual income from prostitution.

On the contrary, employability is estimated to exert a strong negative impact on the probability of falling into prostitution, with a one standard deviation variation – roughly corresponding to a shift from the median to the fourth quintile of the empirical distribution – impacting between -20% and -27%. In other words, those characteristics that are positively valued by the labor market (and thus should increase the potential labor income) reduce a trans person's probability of being a sex worker. Thus this finding may be interpreted as denoting an average preference for working in the formal market, with prostitution as a second-best choice only. Such hypothesis is reinforced by the finding mentioned in the previous section, that no sex worker declares their activity to be the *first* job they found, while they are significantly more likely to state that it is the *only* job found. Indeed, choosing the latter answer option is associated with a higher probability of being a sex worker by between +23 and +25%. Roughly of the same magnitude is the coefficient of the other variable

[10] The linear probability model has lower computational requirements but its use is generally not advised for samples.

[11] Computed with the SUEST estimation module of the software Stata 12, allowing for heteroskedasticity in the error terms.

denoting discrimination, the dummy variable signaling a high frequency of hiring discrimination suffered by the person, whose impact ranges between +20% and +31%.
Finally, trans people's agency does not appear to be associated with a significantly lower probability of being a sex worker, except when one of the variables denoting discrimination is dropped (the result may thus suffer from omitted variable bias) and in the linear probability model. However, it should be recalled that the magnitude of the coefficients of such latter model are not directly comparable with those obtained from probit estimations (due to scale reasons), and that the LMP model was only included in order to check for the potential simultaneous endogeneity of employability and income, while its application for the analysis of small samples is not advisable.

[*Tab. 6* around here; full page]
[*Tab 7* around here; full page]

CONCLUDING REMARKS

The difficulty of sampling hard to reach and hidden populations has limited so far the ability to empirically test the economists' predictions on the determinants of falling into prostitution. Yet, while an emerging stream of qualitative research is growing and is increasingly appreciated by non-mainstream scholars such as feminist economists (compare Martha Starr 2014), quantitative evidence remains relevant for policy implications. We contribute in that direction by analyzing a specific, possibly large, segment of the sex market in Italy: that of trans sex workers.
We collected an original data source through non-random sampling, within a study aimed at assessing the discrimination and social exclusion faced by trans people in Italy. In that context, we incidentally gathered a conspicuous amount of information concerning trans sex workers, thus indirectly confirming that trans people may be largely overrepresented among sex workers.
While all trans people in our sample declares to have been a victim of some form of discrimination, sex workers typically suffer from heightened discrimination in the labor market, and possibly less relevant exclusion from family member and relatives. Coupled with their lower average educational qualification, such trends are associated with a higher probability for sex workers to declare of not having found any other occupation.
A multivariate analysis of the determinants of falling into prostitution confirms that pull factors, and specifically prospective income, positively affect the decision to supply sex services, as do push factors such as low employability and past experiences of discrimination. However, within the trans population, the latter drivers seem to weigh more than the former. Accordingly, it is possible to talk of a prostitution trap in which marginalized and stigmatized individuals may fall for lack of better alternatives.
To prevent people from falling in this trap, and to help them exit from it, it seems equally relevant to enhance their individual employability – as standard European active labor market policies seek to do – as well as to effectively fight stigma and discrimination in the labor market. Indeed, discrimination affects trans people not only by establishing a barrier to formal employment, but also by constraining their income potential in the labor market (it thus

impacts on both push and pull factors into prostitution). At the same time, we provide evidence of a risk of discrimination of sex workers, especially in their relation to strangers, clients, healthcare operators and law enforcement officers, significantly higher than the already high risks faced by trans people in general. It thus appears necessary to put in place adequate protection measures of sex workers, which legislation cannot simply ignore.

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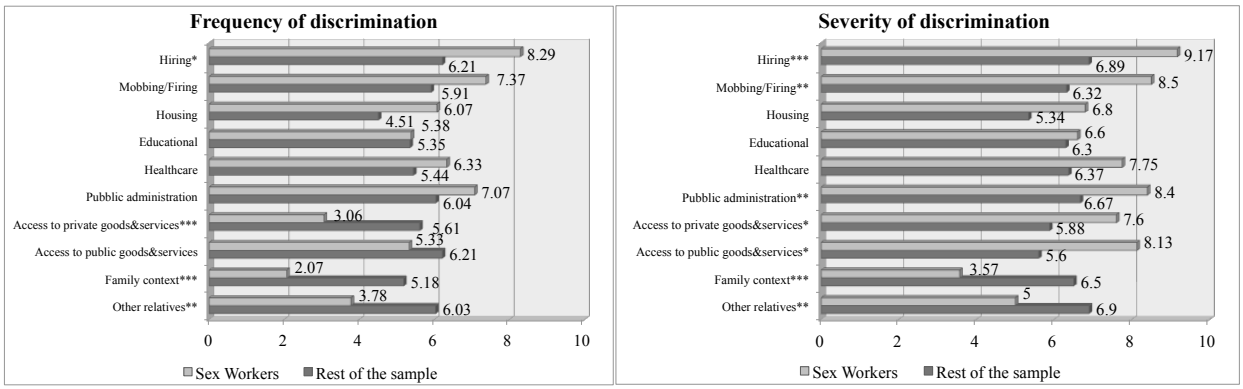

Fig. 1 Indicators of discrimination

Notes: "Frequency of discrimination" measures the incidence of discrimination experiences on a range between 0 (never) and 10 (daily); "intensity of discrimination" measures the magnitude of discrimination experiences on a range between 0 (not significant) to 10 (serious).

***: p<0.01, ** : p<0.05, * : p<0.1

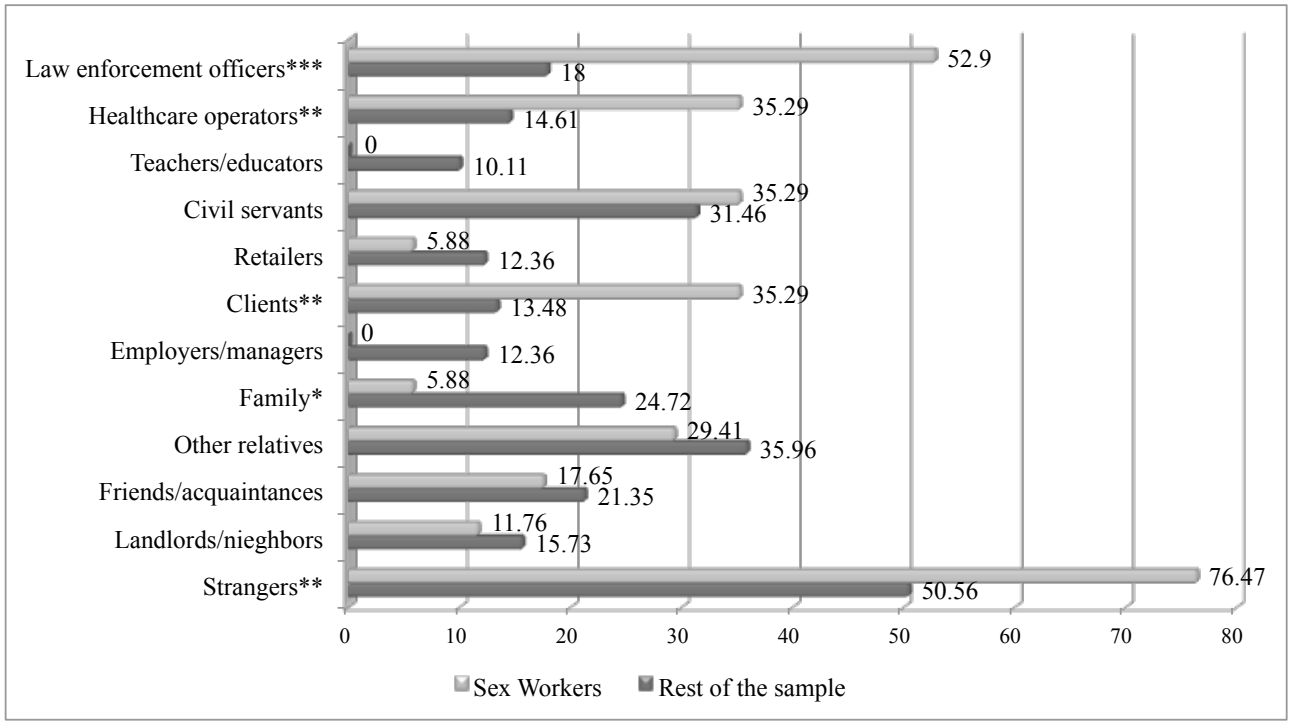

Fig 2 Agents of discrimination (%)

Notes: ***: p<0.01, ** : p<0.05, * : p<0.1

Tab. 1 Demographics of the sample

	Sex workers	*Rest of the sample*
Age *(years, mean)*		
F(1,104)=0.13	35.4	36.4
Gender Identity *(share)*		
Transsexual, pre-transition	0.47	0.34
Transsexual, in transition	0.35	0.34
Transsexual, post SRS	0.12	0.15
Transgender	0.06	0.17
	$\chi^2(3)=2.65$	
City size *(share)*		
Small (up to 10,000 inhabitants)	0.06	0.11
Medium (between 10,001 and 50,000)	0.0	0.30
Large (50,001 or more)	0.94	0.59
	$\chi^2(2)=8.05$**	
Marital status *(share)*		
Single	0.94	0.88
Married (before transition)	0.0	0.01
Divorced as a consequence of transition	0.0	0.02
Divorced for other reasons	0.0	0.04
Separated	0.0	0.03
Widowed	0.06	0.01
	$\chi^2(5)=3.69$	
Stable emotional relationship *(share)*		
Yes	0.18	0.30
No	0.82	0.70
	$\chi^2(1)=1.13$	
Years in stable emotional relationship *(mean)*		
*F(1,28)=4.15***	7.0	2.8
Household size *(n. of members, mean)*		
F(1,104)=0.07	2.23	2.34
Cohabiting with… *(share)*		
Alone	0.59	0.39
Family of origin	0.29	0.29
Partner	0.12	0.20
Friend(s)	0.0	0.12
	$\chi^2(3)=3.73$	

Notes: *** : p<0.01, ** : p<0.05, * : p<0.1

Tab. 2 Indicators of Social Inclusion

	Sex workers	*Rest of the sample*
Educational qualification *(share)*		
Primary	0.41	0.30
Vocational	0.41	0.15
Upper secondary	0.59	0.38
University and post-graduate	0.0	0.10
None	0.12	0.07
	$\chi^2(4)=12.57$**	
Years of study *(mean)*		
F(1,104)=2.25	9.3	11.1
House is… *(share)*		
Owned	0.18	0.31
Owned but still paying the mortgage	0.00	0.03
Rented	0.76	0.45
Occupied free of charge	0.06	0.19
Owned by my partner	0.00	0.01
	$\chi^2(4)=6.00$	
Weekly household food expenditure *(per household member, mean)*		
Up to 50€	0.06	0.15
Between 51€ and 100€	0.29	0.40
Between 101€ and 150€	0.24	0.30
Between 151€ and 200€	0.12	0.10
*2*01€ or more	0.29	0.04
	$\chi^2(4)=11.97$**	
Household net monthly income *(per household member, mean)*		
Up to 500€	0.24	0.17
Between 501€ and 1000€	0.29	0.29
Between 1001€ and 1500€	0.18	0.39
Between 1501€ and 2000€	0.24	0.10
*2*001€ or more	0.06	0.04
	$\chi^2(4)=4.38$	
Self-perceived health status *(share)*		
Excellent	0.41	0.18
Good	0.41	0.48
Fair	0.18	0.26
Poor	0.00	0.07
Very Poor	0.01	0.00
	$\chi^2(4)=5.42$	

Notes: *** : p<0.01, ** : p<0.05, * : p<0.1

Tab. 3 Indicators of social capital

	Sex workers	*Rest of the sample*
Finding employment: the role of friends and acquaintances *(share)*		
Relevant	0.08	0.22
Fair	0.08	0.24
Modest	0.00	0.16
None	0.85	0.38
	$\chi^2(3)=9.34$**	
Finding employment: the role of family members *(share)*		
Relevant	0.00	0.06
Fair	0.00	0.21
Modest	0.00	0.15
None	1.00	0.58
	$\chi^2(3)=8.09$**	
Active citizenship *(voluntary work in the last year, share)*		
Yes	0.47	0.44
No	0.53	0.56
	$\chi^2(1)=0.06$	

Notes: *** : p<0.01, ** : p<0.05, * : p<0.1

Tab. 4 Indicators of agency

	Sex workers	*Rest of the sample*
Decided to oppose discrimination *(share)*		
Yes	0.23	0.49
No	0.77	0.51
	$\chi^2(1)=3.87$**	
In the face of discrimination, requested help to…*(share)*		
Police	0.29	0.12
A lawyer	0.18	0.04
An association	0.12	0.17
Friends or acquaintances	0.23	0.24
Family	0.00	0.11
Others	0.18	0.32
	$\chi^2(3)=8.09$**	
Reason for current employment *(share)*		
It is the only one found	*0.88*	*0.25*
It is the first found	*0.0*	*0.09*
It corresponds to the person's studies	*0.0*	*0.07*
The person likes the sector/activity	*0.0*	*0.47*
The person thinks it is a more tolerant environment	*0.0*	*0.0*
It is well paid	*0.12*	*0.11*
	$\chi^2(5)=23.53$***	

Notes: *** : p<0.01, ** : p<0.05, * : p<0.1

Tab. 5 Employment and equivalent household incomes

	Probability of being employed (probit model, average marginal effects)			*Equivalent household income (OLS)*		
	I	*II*	*III*	*IV*	*V*	*VI*
Vocational training	0.210*	0.247**	0.246**	0.330	0.343	0.446
	(0.128)	*(0.116)*	*(0.117)*	*(0.214)*	*(0.226)*	*(1.412)*
Upper secondary or higher education	0.296***	0.173*	0.173*	0.0679	0.0800	0.222
	(0.0944)	*(0.101)*	*(0.101)*	*(0.206)*	*(0.210)*	*(1.937)*
Transsexual, in transition	0.137	-0.0506	-0.0500	-0.113	-0.162	-0.0949
	(0.121)	*(0.105)*	*(0.106)*	*(0.195)*	*(0.222)*	*(0.866)*
Transsexual, post SRS	0.177	0.0606	0.0600	0.180	0.166	0.252
	(0.151)	*(0.134)*	*(0.135)*	*(0.276)*	*(0.300)*	*(1.075)*
Transgender	0.263**	0.0940	0.0943	-0.188	-0.248	-0.118
	(0.125)	*(0.121)*	*(0.122)*	*(0.232)*	*(0.264)*	*(1.679)*
Bad health conditions	0.186	0.336*	0.338*		-0.339	-0.251
	(0.215)	*(0.203)*	*(0.204)*		*(0.301)*	*(1.151)*
Age		0.0151	0.0148	0.0829**	0.0748*	0.0753*
		(0.0326)	*(0.0328)*	*(0.0385)*	*(0.0435)*	*(0.0444)*
Age squared		-0.0211	-0.0207	-0.129***	-0.115**	-0.115**
		(0.0419)	*(0.0424)*	*(0.0452)*	*(0.0528)*	*(0.0532)*
Cohabiting with partner	0.176	0.187	0.188	-0.343*	-0.342*	-0.259
	(0.137)	*(0.114)*	*(0.115)*	*(0.188)*	*(0.187)*	*(1.115)*
Social capital	0.163*	0.145*	0.145*	-0.0949	-0.0869	-0.00976
	(0.0949)	*(0.0866)*	*(0.0861)*	*(0.165)*	*(0.177)*	*(0.996)*
Household size		0.00844	0.0101	-0.547***	-0.535***	-0.535***
		(0.0300)	*(0.0370)*	*(0.0524)*	*(0.0679)*	*(0.0692)*
Household home owner		0.115	0.115	0.0272	0.0535	0.0527
		(0.0870)	*(0.0872)*	*(0.180)*	*(0.189)*	*(0.192)*
Current employment: “Only job found”		0.0110	0.0109	0.0891	0.129	0.125
		(0.0896)	*(0.0898)*	*(0.166)*	*(0.166)*	*(0.170)*
Discrimination in hiring: “very frequent”		-0.444***	-0.443***		-0.0845	-0.0843
		(0.0711)	*(0.0713)*		*(0.233)*	*(0.234)*
Equivalent household income			0.00289			
			(0.0476)			
Employability						-0.460
						(6.014)
Observations	93	93	93	106	106	106
Model predictive value	Correctly classified: 72%	Correctly classified: 77.4%	Correctly classified: 77.4%	R^2 = 55.9%	R^2 = 56.5%	R^2 = 56.5%
Model specification	$Chi^2(8)$ = 16.905**	$Chi^2(14)$ = 51.842***	$Chi^2(15)$ = 52.538***	F(12, 93) = 14.24***	F(14, 91) = 13.78***	F(15, 90) = 13.27***

Notes: robust standard errors in parentheses. All regressions include a constant term. Reference group: transsexual, pre-transition.
*** : p<0.01, ** : p<0.05, * : p<0.1

Tab. 6 Determinants of the probability of falling into prostitution

	Probit model, average marginal effects						
	I	*II*	*III*	*IV*	*V*	*VI*	*VII*
Current employment: "only job found"	0.232***	0.228***	0.232***	0.250***			0.253***
	(0.0363)	*(0.0327)*	*(0.0365)*	*(0.0447)*			*(0.0355)*
Discrimination in hiring: "very frequent"	0.211***	0.204***	0.214***	0.229***	0.310***	0.292***	0.232***
	(0.0527)	*(0.0291)*	*(0.0529)*	*(0.0337)*	*(0.0776)*	*(0.0686)*	*(0.0281)*
Equivalent household income		0.0518***		0.0608***	0.0640***	0.0574***	0.0611***
		(0.0150)		*(0.0199)*	*(0.0188)*	*(0.0202)*	*(0.0191)*
Agency: reacted to discrimination	-0.0506	-0.0483	-0.0248	-0.00718		-0.0995*	
	(0.0469)	*(0.0403)*	*(0.0385)*	*(0.0363)*		*(0.0573)*	
Employability			-0.197*	-0.262**	-0.250*	-0.233*	-0.269***
			(0.109)	*(0.116)*	*(0.135)*	*(0.137)*	*(0.101)*
Observations	106	106	106	106	106	106	106
Model specification	$Chi^2(3) = 28.584$***	$Chi^2(4) = 45.695$***	$Chi^2(4) = 25.627$***	$Chi^2(5) = 31.716$***	$Chi^2(3) = 22.973$***	$Chi^2(4) = 24.276$***	$Chi^2(4) = 28.393$
Correctly classified	93.4%	93.4%	95.3%	95.3%	90.6%	88.7%	95.3%

Notes: robust standard errors in parentheses. All regressions include a constant term. Reference group: transsexual, pre-transition.
*** : p<0.01, ** : p<0.05, * : p<0.1

Table 7 Determinants of the probability of falling into prostitution, instrumental variables (maximum likelihood) estimates

	IV Probit model, average marginal eff.	*IV Probit model, average marginal eff.*	*IV Probit model, average marginal eff.*	*IV Probit model, average marginal eff.*	*Linear probability model, GMM estimator*
	I	*II*	*III*	*IV*	*V*
Current employment: "only job found"	0.227***	0.229***	0.244***	0.261***	0.404***
	(0.0341)	*(0.0373)*	*(0.0469)*	*(0.0449)*	*(0.0806)*
Discrimination in hiring: "very frequent"	0.181***	0.200***	0.212***	0.220***	0.248***
	(0.0485)	*(0.0504)*	*(0.0497)*	*(0.0398)*	*(0.0523)*
Agency: reacted to discrimination	-0.0436	-0.0317	-0.00557	-0.0175	-0.0896**
	(0.0371)	*(0.0415)*	*(0.0366)*	*(0.0393)*	*(0.0446)*
Equivalent household income	0.0357		0.0500	0.0650***	0.0581*
	(0.0358)		*(0.0331)*	*(0.0229)*	*(0.0305)*
Employability		-0.175*	-0.251**	-0.267**	-0.152
		(0.104)	*(0.118)*	*(0.107)*	*(0.114)*
Instrumented variable	Equivalent HH income	Employability	Equivalent HH income	Employability	Eq. HH income, Employability
Instruments	Table 4.1, column V	Table 4.1, column II	Table 4.1, column VI	Table 4.1, column III	Table 4.1, columns V and II
Correlation of residuals: $\hat{\rho}$	0.357	0.179	0.246	0.416	
	(0.780)	*(0.210)*	*(0.692)*	*(0.513)*	
ln(σ)	-0.326***	-4.213***	-0.328***	-4.212***	
	(0.104)	*(0.0853)*	*(0.102)*	*(0.0856)*	
Wald test of endogeneity: H_o: $\hat{\rho} = 0$	$Chi^2(1) = 0.210$	$Chi^2(1) = 0.728$	$Chi^2(1) = 0.126$	$Chi^2(1) = 0.659$	
Test of endogeneity (orthogonality conditions): Both					GMM C: chi2(2) = 1.94059
Test of endogeneity (orthogonality cond.): Income					GMM C: chi2(1) = 1.19097
Test of endogeneity (orthogonality cond.): Employability					GMM C: chi2(1) = 1.12239
Generalized Hausman test (SUEST): Income	$Chi^2(1) = 0.20$		$Chi^2(1) = 0.12$		
Generalized Hausman test (SUEST): Employability		$Chi^2(1) = 0.34$		$Chi^2(1) = 0.18$	
Generalized Hausman test (SUEST): Both			$Chi^2(2) = 0.40$	$Chi^2(2) = 0.34$	
Observations	106	106	106	106	106
Model specification	$Chi^2(4) = 51.764$***	$Chi^2(4) = 25.374$***	$Chi^2(5) = 32.763$***	$Chi^2(5) = 26.541$***	$Chi^2(5) = 91.843$***
Model predictive value	Corr. classified: 94.3%	Corr. classified: 95.3%	Corr. classified: 95.3%	Corr. classified: 95.3%	$R^2 = 51.8\%$

Notes: robust standard errors in parentheses. All regressions include a constant term. Reference group: transsexual, pre-transition.
*** : p<0.01, ** : p<0.05, * : p<0.1