**Notes on Targeting Papers**

**Gazeaud (2020):** This paper looks at how measurement error in consumption data affects the performance of PMT. The author finds that measurement error biases PMT scores in a predictable way, which induces targeting errors. Importantly, the bias only affects the absolute level the estimates rather than the rankings, so programs targeting a fixed proportion of the population will be unaffected. **This paper includes a nice overview of the critiques of PMT and lists some important references.**

**Hillebrecht et al. (2020):** This paper uses data from Burkina Faso to compare CBT to a number of statistical targeting methods, including PMT. They find that PMT outperforms CBT in rural areas, but not so much in more urban areas. They find that this relates to heterogeneous definitions of poverty: urban areas are more oriented toward consumption-based definitions of poverty. The paper also includes a cost-effectiveness analysis and finds that CBT is the most cost effective approach.

**Hillebrecht et al. (2020):** This paper looks at the dynamic performance of PMT versus CBT. They find that PMT performs better immediately, but its performance degrades relative to CBT over time. After a certain duration of time, CBT actually performs better.

**Handa et al. (2020):** This paper examines the targeting performance of three cash-transfer schemes that used community-based targeting. Specifically, they look at how poor program beneficiaries are relative to national samples. The programs analyzed include Malawi, Kenya, and Mozambique. One interesting feature of the paper is that they use PCA to generate wealth indexes to serve as proxies for material well-being.

**Basurto et al. (2020):** The authors examine the targeting performance of an agricultural subsidy program in Malawi. The program used local chiefs to target benefits and they find (1) proxy-means test outperform community-based targeting and (2) evidence of nepotism, though they argue that the actual effect is negligible. Interestingly, they argue that the chiefs may not be targeting on need, but rather trying to find those households that can make the most productive use of the subsidies. They find evidence to suggest that this is the case. **This paper targets specifically on food expenditure and provides some references for why this is better than income.** **The data for the paper may also be available.**

**Premand and Schnizer (2019):** This paper looks at the relative efficiency, legitimacy, and program impact of three alternative targeting methods: PMT, CBT, and FCS. They find that PMT tends to perform favorably in terms of predicting per capita consumption. They also find that PMT is perceived as more legitimate and leads to greater impacts, at least in terms of food stocks. This paper is very similar in spirit to Alatas et al. and presumably has community rank data available.

**Asri (2019):** This paper examines the targeting performance of India’s old age social pension program. The author finds that targeting improved with some strategic reforms, but performance still remains bad and approximates random targeting. The key issue is that targeting is based on the “below poverty line” card and people can obtain these cards if they have the right connections. The results suggest reforming the BPL scheme.

**Bah et al. (2019):** This paper examines the implications of Indonesia’s Unified Targeting Database (UDB) on the targeting of social safety net programs. They highlight the importance of enumeration errors, or errors associated with omitting some households from the database. They find that enumeration errors can be substantial and recommend greater care in choosing which households to include in the database.

**Tohari et al. (2019):** This paper looks at Indonesia’s unified targeting system to examine its targeting performance and impact on poor households. They find that households participating in three complementary poverty alleviation programs have roughly 30 per cent higher per capita expenditure than those receiving nothing.

**Han and Gao (2019):** This paper looks at the targeting performance of Dibao, which is a Chinese social assistance program that uses CBT. They find evidence of elite capture, particularly for elites with positions outside their own village. They also include a discussion of multidimensional poverty measures and argue that community rankings tend to conform more closely with multidimensional poverty.

**Karlan and Thuysbaert (2019):** This paper looks at how the “targeting the ultra-poor” (TUP) process performs relative to proxy means testing in Honduras and Peru. They find that the methods are comparable and thus suggest that cost considerations should drive the selection of methods. They use a couple interesting approaches to proxy means testing, including the Progress out of Poverty Index (PPI) and a housing index based on PCA.

**Briggs (2018):** This paper looks at the geographical targeting of multilateral aid. It finds that within countries aid tends to be targeted towards relatively wealthy areas.

**Brown et al. (2018):** This paper looks at the performance of proxy means testing using datasets from a number of different countries. They generally find that PMT performs poorly, though it is an improvement over uniform targeting. In particular, it is associated with high exclusion rates and the authors argue that this can be reduced by using quantile regressions. **The paper includes a nice discussion of targeting in general and a nice discussion of the various measures of targeting performance.**

**Engstrom et al. (2017):** This paper uses remote sensing data to construct timely poverty maps for Sri Lanka. My understanding is that they first create poverty maps in the traditional way (predicting poverty using census data and a statistical model), but then regress poverty on a number of remotely sensed features. Given that the remotely sensed data is observed frequently, this allows one to update the poverty maps on a regular basis.

**Lanjouw et al. (2016):** This paper creates an updated poverty map for Vietnam. They discuss the standard “Elbers” method for generating poverty maps and examine the implications of geographical targeting. **This is a good reference for the standard method of geographical targeting.**

**Alatas et al. (2016):** This paper looks at how self-targeting of a program can improve upon targeting relative to standard approaches (e.g., PMT). They find that introducing a small cost to applying for a program substantially improves targeting because the rich do not find the costs justifiable given the small likelihood that they’ll receive benefits after screening. Marginal increases in the cost does little to improve self-targeting.

**McBride and Nichols (2016):** This paper looks at how machine learning, namely random forests, can improve targeting performance. They provide a nice overview of metrics for assessing targeting performance.

**Stoeffler et al. (2016):** This paper looks at the performance of community-based targeting (CBT) and proxy-means testing (PMT) in the context of Cameroon. They find that CBT performs quite poorly relative to PMT, though the PMT results are not exactly promising. They suggest that better approaches to integrate the two methods may be warranted. **The paper also includes a number of interesting ways to assess targeting performance. Further, the data for this paper could be used for developing better hybrid targeting approaches. Finally, note that the paper discusses in detail the merits of PMT and CBT.**

**Sabates-Wheeler et al. (2015):** This paper looks at an experiment in Kenya where locations were randomly assigned to three different targeting procedures: community-based targeting, targeting by age, and targeting by dependency ratio. They find that among the three, CBT is best. They also conduct some simulations that suggest that PMT would have performed favoably.

**Kilic et al. (2015):** This paper looks at community-based targeting in Malawi using nationally-representative data. They find that CBT is basically not targeted or not progressive. They find that well-connected people tend to receive benefits. Note that Paul is a co-author on this paper.

**Devereaux et al. (2015):** This paper is a review of the literature related to targeting. **It includes a nice discussion of design versus implementation targeting errors. The authors also provide a useful breakdown of community-based targeting schemes (i.e., in terms of delegation and devolution) and programs that use multiple approaches (i.e., simultaneous, sequential, or parallel).**

**Schuring (2014):** This paper looks at community preferences surrounding community-based targeting. That is, they look at what people value or prefer when making decisions about who to target, and find that poverty is an overarching concern. They find little evidence for elite capture.

**Robertson et al. (2014):** The authors use data from Zimbabwe to examine the differences between means testing (i.e., using census data) and community-based targeting. They find that both methods perform poorly and agree very poorly with one another.

**Cameron and Shah (2014):** This paper looks at the effects of poor targeting on social capital and crime with data from Indonesia. They find that the Indonesian program, due to poor targeting, reduced social capital and increased crime. They found that leakage errors are more important than errors of undercoverage. **This paper provides a very good example of the deleterious effects of poor targeting.**

**Mehta et al. (2013):** This paper examines a self-targeted food subsidy program in the Philippines. They find that the program was poorly targeted, with only about 25 percent of the poor being reached (see pg. 209). They argue that the poor targeting was due to the fact that poor communities didn’t have access to usable services and had little “voice” for expressing their concerns. **The introduction of this paper provides a nice discussion of self-targeting and some useful references.**

**Liu and Barrett (2013):** The paper looks at a self-targeted employment program in India. They find, above all, that the program is pro-poor in the sense that the poor more frequently nominate themselves. However, the program exhibits a “middle class” bias, as the more affluent of those participating are the ones that tend to get jobs. Finally, the authors note that there is a lot of performance heterogeneity across states, implying that the program can be implemented in a successful way.

**Murgai et al. (2013):** This paper looks at a workfare program in India and estimates the foregone wages of participants to try to understand how costly the program is. They find that foregone earnings are roughly one-third of the workfare wage, though there is a fair amount of heterogeneity. There’s not much discussion of targeting error rates.

**Lang et al. (2013):** This paper creates maps that depict geographical areas where the marginal returns to assets are highest. The idea is to overlay the maps with poverty maps to identify areas in need and, then, decided on which interventions may be most beneficial for those areas.

**Suryadarma and Yamauchi (2013):** This paper looks at the issue of missing funds as it relates to targeting. The authors, examining the case of Indonesia, find that only 69 percent of planned transfers are actually claimed by beneficiaries. More interesting, they argue that once these missing funds are accounted for (i.e., actual rather than claimed beneficiaries are examined), the targeting appears more regressive.

**Niehaus et al. (2013):** This paper looks at the performance of proxy means testing when the implementing agent is corruptible. They find that more complicated proxy means tests may worsen targeting due to enforceability issues. They use data from India to support the claims from their theoretical model. **There may be something important related to the relationship between capabilities and this enforceability issue. Return to this when thinking about how targeting on capabilities relates to the political economy of targeting.**

**Pan and Christiaensen (2012):** This paper empirically examines elite capture in the context of an agricultural subsidy program in Tanzania. They find that about 60 percent of the vouchers went to households affiliated with local officials. They find that the problem is worse for more remote and more unequal villages.

**Alatas et al. (2012):** This paper is very rich and presents a number of interesting findings. First, they find that proxy means tests outperform community and hybrid targeting in terms of predicting per capita consumption. Second, they find evidence that communities are not targeting on per capita consumption, but rather on things like capacity to earn and vulnerability. This points directly to a capabilitarian framework (see their reference to Mirrlees [1971], which may be a critical citation for moving to a capabilities-oriented approach). Fourth, they find that evidence that communities fatigue as the ranking process goes on. Finally, they find evidence that community-based targeting yields greater satisfaction than proxy means testing. **Note that the data is available on the Harvard Dataverse.**

**Camacho and Conover (2011):** This paper looks at corruption related to the targeting of social programs in Colombia. They find that, when the algorithm used to generate scores for proxy means test was released to municipal officials, many scores were subsequently manipulated to be below the poverty threshold. They found evidence that the manipulations were more severe in areas where elections were competitive. The take away is that the elections created incentives for incumbents to manipulate social programs to buy support, though this could only occur when those officials knew how the targeting worked.

**Ravallion (2009):** This paper looks at the targeting performance of the Di Bao program in China. The key message is that performance in terms of targeting does not directly relate to how well the program does in alleviating poverty or tell us much about cost effectiveness. The paper has a nice discussion of the various targeting measures. **Ravallion also mentions that in some provinces, administrators tried to target on “imputed” income or potential income.**

**Barhan et al. (2009):** This paper looks at the political reservation system in West Bengal India. It looks at how the reservation system affected the targeting of public resources. The authors find that the reservations associated with scheduled caste and tribe did influence targeting in the sense that it increased benefits received by the village as a whole and also improved intra-village targeting.

**Fiszbein and Shady (2009):** This is a chapter on targeting in a larger book. They provide two things of interest. First, they include a table that summarizes the targeting strategies for a number of well-known CCTs. Second, they provide a nice graph that summarizes the coverage proportions for a number of programs.

**Coady and Parker (2009):** This paper looks at how the various types of targeting used for *Oportunidades* contributed to its targeting performance. The paper distinguishes four stages: knowledge of the program, application to the program, administrative targeting (PMT), and the selection of the transfer size. The first two stages refer to self-targeting. **The paper has a nice conceptualization of the targeting problem that relates it to a social welfare function**. **They also discuss the value of using various types of targeting methods to improve targeting performance.**

**Ravallion (2008):** This paper looks at the extent to which findings of mis-targeting are due to the mis-measurement of income or the genuine mis-targeting of a given program. The author calculates a counterfactual poverty score that is essentially a propensity score, and compares targeting performance based on the propensity score to that based on income. Even when using the propensity score, he finds substantial targeting issues, indicating that mis-measurement is only part of the problem.

**Elbers et al. (2007):** This paper looks at how geographically disaggregated poverty maps can be used for geographical targeting. They find that more disaggregation is useful when it comes to targeting, but the performance is far from optimal. **The authors suggest that geographical targeting could maybe be combined with other targeting methods to improve performance.**

**Bardhan and Mookherjee (2006):** This paper looks at elite capture and targeting using data from West Benghal. They find no evidence of elite capture within villages, but some evidence that elites were influential in determining the distribution of resources across villages.

**Bardhan and Mookherjee (2005):** This paper provides a theoretical examination of elite capture.

**Galasso and Ravallion (2005):** This paper examines, both theoretically and empirically, how decentralized targeting (i.e., community-based targeting) affects overall targeting performance. They find that decentralization can improve targeting performance, but that performance deteriorates as inequality in any given village increases. They used data from Bangladesh. **They discuss some anecdotal evidence of elite capture and provide a nice discussion of the targeting differential.**

**Stifel and Alderman (2005):** This paper looks at the targeting of the Vaso de Leche program in Peru. They provide a nice discussion of targeting differentials and their decomposition (i.e., within and across villages). Most importantly, they develop a similar targeting coefficient that looks at the share of resources correctly targeted. They develop a decomposition for this coefficient.

**Reinikka and Svensson (2004):** This paper examines educational financing in Uganda. They find that schools only received 13 percent of the resources allocated to them. Local officials capture the rest of the resources. Moreover, they find that schools in better-off communities received higher shares of entitlements.

**Dutta and Ramaswami (2004):** This paper examines food subsidies in India and asks whether shifting subsidies from one type of good to another can be welfare enhancing. Food subsidies are self-targeted in the sense that people choose whether or not to consume the subsidized goods. They find that shifts can be welfare enhancing in some states, particularly when the share of consumption devoted to the newly subsidized good is large. When this is not the case, then the shift will not be welfare enhancing.

**Coady et al. (2004b):** This article summarizes the targeting performance of 122 anti-poverty interventions in 48 countries. They find that the median program transfers 25 percent more resources to the poor than would a universal or random allocation. They also find that a quarter of interventions are regressive. Their results show wide variation across targeting methods.

**Barrett and Clay (2003):** This is a great paper that finds that factor-market imperfections can disrupt the supposed positive relationship between incomes and reservation wages. This means that self-targeting will be associated with targeting errors, as it is those with the lowest reservation wages that will be attracted to the program. **The paper also suggests (on page 175) that a combination of targeting methods might be beneficial.**

**Rai (2002):** This paper is purely theoretical and shows how inducing villages to make reports about each other can reduce targeting costs. That is, the paper attempts to provide theoretical insights into community-based targeting.

**Conning and Kevane (2002):** This paper provides a deep conceptual overview of the pros and cons of community-based targeting. There are a number of great references, including good anecdotes. They discuss important things like decentralization versus devolution, capabilities-related issues, and the “targeting paradox,” among others. The paper is a bit out of date, but it is an authoritative reference on community-based targeting.

**Alderman (2002):** This paper is the canonical reference for the argument that local officials possess greater information when it comes to targeting poverty. Using data from Albania, the paper finds that NE – a decentralized program -- targets better than proxy-means test would target. Note that the results are from a fairly interesting regression-based approach.

**Skoufias and Davis (2001):** This paper examines the targeting performance of Mexico’s PROGRESA, which uses a form of proxy-means testing. They find that the method performs reasonably well, but that performance deteriorates for less marginal communities. This is a good reference justifying the use of proxy-means tests.

**Ravallion (2000):** This paper develops a method for assessing targeting performance when no microdata is available. The method regresses spending on the poverty rate for a given area (e.g., district or province) and shows that under certain assumptions the associated coefficient captures the targeting differential. Ravallion also develops a method for decomposing targeting performance within and across areas. The paper includes an application using data from Argentina.

**Bigman et al. (2000a,b):** These papers discuss geographical targeting. One paper is an overview paper and another is a specific application to Burkina Faso. The overview paper is especially relevant because it provides all the arguments for and against geographic targeting. These papers appear to be some of the better references for geographic targeting.

**De Donder and Hindricks (1998):** This paper looks at the political economy of targeting and discusses two critical issues associated with targeting: labor supply disincentives and the issue of political support. The paper presents a theoretical model to examine the influence of these factors. This appears to be one of the major papers on the political economy of targeting.

**Bergeron et al. (1998):** This paper takes an in-depth look at the reliability of community-based rankings and finds that there are wide discrepancies between rankings generated by different community members. This suggests that community rankings may be quite unreliable. The authors use data from Honduras.

**Alderman and Lindert (1998): This paper provides a nice conceptual overview of the benefits and limitations of self-targeting, particularly in the context of food subsidies.** The authors highlight the importance of demand elasticities and income inequality, finding that low (or negative) demand elasticities and higher levels of inequality tend to make self-targeting more effective. They look at two case studies to illustrate their arguments.

**Wodon (1997):** This paper uses data from Bangladesh to estimate ROC curves, which are a simple way to examine the targeting performance of a particular targeting method in terms of sensitivity and specificity. Above all, ROC curves are really just a way to graphically represent sensitivity and specificity for alternative poverty lines and alternative targeting methods.

**Adams et al. (1997):** This paper uses data from Bangladesh to examine the validity of community ranking. Their results are favorable to community rankings, so this appears to be one of the few papers that is broadly supportive of such ranking schemes.

**Sen (1995):** This paper discusses the political economy of targeting and argues against an income-based approach to targeting. Specifically, Sen discusses the importance of an agency-oriented view of the poor rather than a patient-oriented view of the poor. He also provides an interesting discussion of how functionings (and thus capabilities) are less susceptible to incentive issues.

**Ravallion (1991)**: This paper provides an overview of rural employment schemes, which tend to be self-targeted. Ravallion finds that they reach the poor fairly well and discusses why we might expect this to be the case. He uses two example schemes to illustrate: one in India and one in Bangladesh.

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|  | Pros | Cons |
| PMT | Objective | Degrades over time  Measurement errors  Not entirely accurate  Community dissatisfaction  Focuses on chronic poverty (not shocks) |
| CBT | Community satisfaction | Elite capture  Expensive |