

# NON-MARKET VALUE: FROM RECOGNITION TO ESTIMATION

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## ABSTRACT

Market value is a widely adopted basis for making decisions about how real property is allocated in societies. Globally, and particularly in developing countries, there is a pressing need to understand how the value of property arises and can be estimated, particularly in situations where there are vulnerable populations and where there is unequal access to information, knowledge and power.

This paper traces the development of the concept of non-market property value and its nascent recognition by the property valuation profession. The motivations for considering non-market value are the growing awareness of the value of ecological and sociocultural capital, the recognition of the legitimacy of unregistered real property, and the need to provide fair compensation for expropriated real property. The paper identifies the key issues to be addressed if non-market value is to be recognised as basis of value that can be implemented alongside market value.

## 1. INTRODUCTION

In relation to real property, ‘value’ refers to the importance humans place on the benefits that are derived from holding property rights (Brown & Raymond, 2007; Chen, 2018; Plantinga & Miller, 2001). These benefits may be economic, sociocultural or ecological. The market value of real property is mainly, though often by no means entirely, determined by the economic use value that the rights in that property can generate (Angeris et al., 2020; Lazrak et al., 2014). Yet, real property can provide benefits to individuals and communities that may not be traded in a market, so the value of these benefits may not be captured by their market value (Freeman et al., 2014). For example, forest land may provide economic value through timber production but may also have a socio-cultural value to the locality, and an ecological value to the planet (natural capital) (Vries et al., 2018).

Values that are not revealed in markets, *non-market values*<sup>1</sup>, are often difficult to quantify (McDermott et al., 2018; Mooya, 2009). Usually, it is when property rights are being acquired by the state compulsorily that non-market value needs to be estimated as a basis for compensation. Market transparency is key: the market learns from itself, and valuers learn from the market (Fish, 2018). Consequently, even while non-market values may be far higher to some lacking the means

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<sup>1</sup>In this paper, the binary market / non-market value terminology is only employed from the broader understanding that in any market there can be many values at play, and many different weights placed upon those values, in deciding to buy or sell.

or opportunity to express themselves in that market, the market value of unregistered land rights is likely to be lower than equivalent registered land rights due to difficulties in identifying the nature and extent of the rights, their reduced transferability and resultant paucity of market information, and increased risk of loss, disputes and conflicting claims.

This paper traces the development of the concept of non-market value and its nascent recognition by the property valuation profession. The motivations for considering non-market value are the growing awareness of the value of ecological and socio-cultural capital, the recognition of the legitimacy of unregistered real property, and the need to provide fair compensation for expropriated real property.

## **2. LITERATURE REVIEW**

There are millions of different values held by millions of different people, and sometimes some of those people, based on some of their values, can agree to exchange assets or liabilities for a monetary consideration. However, by examining the conduct of societies, we can see that monetary valuation is a widely adopted basis for making decisions about how real property (land and rights) is allocated amongst individuals and communities (Chen, 2018; Mooya, 2009) in both formal and informal markets. Mooya (2009) argues that, while valuers themselves remain hugely influential in the market, there is increasing evidence of widespread scepticism about their skills: and market value, as a knowable, determinate and autonomous figure, does not exist because market conditions necessary for its emergence are not found in reality.

As the values that are ecologically rational in one culture may not be so in another, how much more complex may their exchanges be in trans-cultural exchanges? There may be elements of involuntary sociocultural dislocation to be considered in transcultural resettlements which may never emerge in intracultural resettlements. In such cases, laws designed for intracultural property exchanges may not provide just terms in transcultural exchanges which, in Australia to take one example, might make the exchanges unconstitutional, and in all such transcultural cases where non-market values are not addressed, they may well be inadequate to fulfil the Principle of Equivalence,<sup>2</sup> as: “there social and psychological factors which arguably could be incorporated into the meaning of the Principle of Equivalence (Sturgeon 2018, p.2)

## **3. IDENTIFYING VALUES ASSOCIATED WITH REAL PROPERTY RIGHTS**

The theoretical framework for this paper is based upon the concept of value as it relates to the various property rights regimes, with a particular focus on communal property rights, which have typically proved the most challenging to value. This theory is then connected to the concepts and tenets of non-market values, to provide the context for a discussion on approaches to non-market valuation in section four.

Economics is concerned with the values people assign to objects, such as real property. Whether that value is intrinsic (in its own right) or instrumental (as a means to an end), it can help determine how objects are allocated to people within societies (Mooya, 2009). People’s choices, revealed through markets, will determine the monetary value of objects. The extent to which a market

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<sup>2</sup> <https://aiatsis.gov.au/explore/timber-creek-compensation-case>

reveals people's choices (and therefore the values they assign to objects) depends on many factors, which will be explored below, but it is important to stress that markets only work between parties with the motives, means and opportunities to reach agreements. In consequence, those without the means to participate in a market transaction will not be able to express their values in a market transaction no matter how highly they value the property rights concerned.

Economically speaking, property has use value and non-use value. Use values may be direct, indirect or option values (Berta Martín-López et al., 2014). Direct use values are eminently quantifiable monetarily. Indirect use values and option values are harder to quantify monetarily. However, even when estimating market values themselves, "The market itself is not that exact; we are not dealing in physical quantities, but in probabilities of mental reactions, some logical, some emotional, in purchasers and sellers" (Dilmore 1976). Non-use values include sociocultural and ecological values. For property, sociocultural values include subsistence and physiological development, safety and protection, a sense of community, social cohesion and other components of the quality of life. An essential point in our context is that sociocultural values cannot be adequately captured by a monetary numeraire (Vries et al., 2018). Indeed, doing so has been criticised as a form of commodification, extending market norms to values that do not pertain to the monetary domain (Alden Wiley 2020). Ecological value is intrinsic and not usually revealed monetarily in market transactions, although markets in ecosystem services and natural capital are emerging.<sup>3</sup> Real property (or natural capital in this context) has considerable value in terms of ecosystem service provision. Enabled and influenced by biodiversity and biomass, these services are essential to the future of the planet (Dasgupta, 2021).

This plurality of values – economic, sociocultural and ecological – means there is often a disparity between market value and *accounting* value (the contribution an additional unit or property would make to the flow of sociocultural and ecological benefits). Ideally, market value and accounting value would be the same, but private (economic) incentives and social imperatives usually differ (Dasgupta, 2021). For example, whereas property valuers are trained to estimate market values of real property rights, ecological economists estimate accounting prices of items of ecosystems, which include real property.

#### **4. THE ESTIMATION OF NON-MARKET VALUE**

This section connects the concepts of market and non-market values, starting with the link between market values and property rights, before establishing the case for the valuation of non-market property rights. The section continues with an overview of current approaches to valuing unregistered land rights, highlighting social and ecological values, and their disparity from economic values.

##### **a. Property rights and market value**

Exchanges of property rights often take place in markets, and market prices are revealed when property rights are exchanged. Markets vary in terms of the number of buyers and sellers, the flow

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<sup>3</sup> For example, local planning authorities in England can require a biodiversity gain as a condition of planning consent. Developers submit biodiversity gain plans and if the gain cannot be achieved onsite, then agreements with landowners elsewhere can be used to offset the biodiversity loss. These agreements are for a minimum of 30 years.

of market information, rules and regulations, and market segmentation, and this variation will influence exchange prices and therefore market values. It is important to note, though, that since a parcel of real property can have many property rights associated with it, and because they can be held by more than one person or group, it can have more than one value at the same time (FAO, 2002).

In terms of valuation practice and valuation standards, there is already some recognition of non-market value. Relatedly, the basis known as investment value refers to a wider consideration of user-specific issues over and above those revealed by market signals. It thus broadens the viewpoint from market value-in-exchange towards investment value-in-use, whether that use is for occupation or investment purposes. The investment value basis allows valuers to reflect these entity-specific (i.e., non-market) factors in the valuation. A question for valuers is, how should this be done?

#### b. Current approaches to estimating non-market values

The estimation of non-market value relies on approaches and methods that attempt to either express sociocultural and ecological benefits in monetary terms or identify them so that they may be represented and accounted for in non-monetary terms (Awasthi, 2014; Mooya, 2009; Vries et al., 2018). The monetisation of non-market value is an attempt to express value in a holistic sense, but some argue that market values and non-market values cannot be reduced to a single value and, instead, a plurality of values exists (Berta Martín-López et al., 2014). For example, Davy (2024) explains the elements of *Verkehrswert*, the German definition of market value, that account for the plural values of land such as exchange value, use value, territorial value, and existence value. In a communal property rights setting, a community obtains benefits from legitimate individual and communal rights over their land. These rights allow collection of products needed for subsistence and livelihood, and often generate additional income by selling surplus to the market. Market sales reveal, in monetary terms, the value of the rights that underpin them<sup>4</sup>. It may also be possible to use these ‘revealed preferences’ to estimate the monetary value of some products that are consumed ‘internally’ within the community. If units of real property confer similar benefits across a locality, region or a country, and they are tradeable, then the value of these ‘substitutable’ rights can be revealed in a market.

#### c. Further consideration of social and ecological values

As an alternative, values might be reflected relatively rather than in absolute numeraire terms. Asiana et al. (2018) suggest the creation of an index using value factors, and Fish (2018) constructs a ‘points based’ valuation from a base value based on property type and size and then make percentage adjustments using value factors.

Value measures based on substitutability can be expressed in terms of either willingness to pay (WTP) to obtain a benefit or willingness to accept (WTA) compensation for losing a benefit. The choice of numeraire is irrelevant in terms of its effect on how any one individual ranks alternative

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<sup>4</sup> Rights that generate sales can be valued using the *market approach* and rights that generate income, perhaps by leasing real property rights, can be valued using the *income approach*.

outcomes<sup>5</sup>. This approach relies on *stated preferences*, which must be elicited from participants, and there are various methods of doing this.

*Contingent Value Modelling* uses dichotomous choices: whether you would pay for or relinquish a right at a specified price (Carson et al., 2001). Follow-up questions refine the valuation, as new information is added, and any strategic responses identified. It is a deliberative and inclusionary process that is more consensual and participation-oriented towards a local community, which can help foster mutual trust. The method suffers from issues around sample size and composition, protest answers, strategic behaviour, response bias, uninformed responses and respondents disregarding financial constraints.

The most used techniques for eliciting respondents' stated preferences are in-person interviews and questionnaire surveys. It is important to ensure that participants are making decisions as 'citizens' rather than consumers. Questions should be framed to identify society's perception of value rather than value to an individual. Affluent members of society may be *willing* to pay more for a non-market asset than those who are less wealthy because they are *able* to pay more but non-market value should not be judged in terms of *ability* to pay.

A *citizens' jury* is a small group that deliberates a policy question, allowing participants to learn as they go and make more informed decisions as the process evolves (Kenyon & Hanley, 2000; Lally, 1999). On an even wider scale Citizens Assemblies are gaining wide public and political acceptance as a way of broaching and gaining consensus on difficult issues. They incorporate views of the public into decision-making processes, e.g., by opinion polls, surveys, focus groups, referenda and public meetings. Also, citizens' juries are drawn from the affected public (those most likely to be affected by the decision). As the information set changes, this may change participants' values. The jury reveals the benefits and desires behind decisions so, if combined with the quantitative output from say a contingent valuation, this may provide a deliberative, participatory and preference construction approach to valuation. Jury members can be instructed to act as agents for the community.

## 5. ESTIMATING NON-MARKET VALUES: A PROPOSED APPROACH

Drawing on the lessons learnt from the cases presented in the previous section, three principles of valuation of non-market values can be derived – local understanding, subjectivity, and participation.

In terms of local understanding, it is seen that in areas where there is little land mobility, land value is hardly viewed via the lens of monetary value, but with the importance to the individual in question (Asiama et al., 2018; Boydell, 2015; Hartvigsen, 2014; Mimi James & Timothy M. Koller, 2000). Hence the approach used by Asiama et al. (2018), contingent value, choice

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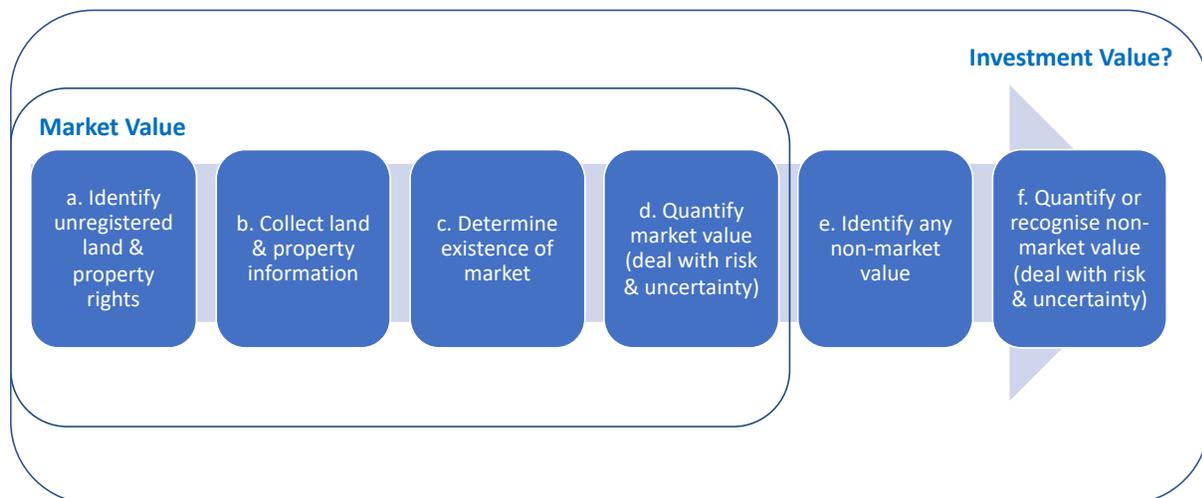
<sup>5</sup> WTP is the maximum amount an individual would be WTP rather than do without an increase in some good. WTA is the minimum sum the individual would require to voluntarily forego an improvement that would otherwise be experienced. Both value measures assume substitutability of preferences, but they adopt different reference points for levels of wellbeing. WTP takes absence of improvement as its reference point while WTA is presence of improvement. WTP and WTA need not be equal; WTP is constrained by budget but there is no upper limit on what that person could require as compensation for foregoing the improvement.

modelling, Fish (2018), suggest another metric for the measurement of the value of the land. This approach will allow for the increase of local understanding of the value of land, not in terms of the market, but to also connect it to their own perception of the surroundings and social connections.

Subjectivity of value is an often-avoided aspect of property valuation, as valuation stands as a pillar supporting an active and transparent market (Chen, 2018; RICS, 2018; Vries et al., 2018). However, in the valuation of non-market values, subjectivity of the value is a key underpinning principle to achieving an equitable value. However, the balancing of the objectivity of the value and the needed subjectivity, requires a look at how much influence the property owners have on the process through participation.

Participation in any process takes to different levels (Arnstein, 1969; Mostert, 2003; Tatwangire & Holden, 2013). In the case of the valuation of non-market values, participation can create a bridge between the community, and the values arrived at, a space which is often shared by professionals. Knight (2015)'s approach also involves the community members as information providers but stops short of having the involvement of the community in arriving at the final values. The citizen jury and community valuer approaches, both involve the community as partners in the process, together with the purchasers. Hence the value will reflect the views of the community more.

Figure 2 suggests how valuers might adapt their current practice to incorporate an estimation of non-market value, and how this process might be encapsulated by the existing basis of market value and non-market value. The stages of this process are expanded upon below.



**Figure 2: Extending Market Value into Non-Market Values**

- a. Identify what rights exist and who is entitled to them. This initial stage requires the valuer to assess the nature, extent, provenance and legitimacy of property rights to be valued. For example, land-based resources to be compensated include current and future mature and growing crops, improvements and natural resources, such as firewood, fruits and fungi, as well as communal rights such as commoners' rights. These rights may be individually or collectively owned.

- b. Collect information on these rights, together with information on the units of land and property to which these rights relate. This can be challenging if the legal and administrative framework is inadequate. Assumptions can be made if information unavailable (e.g., exclusivity of occupation, ability to transfer rights) and special assumptions where the basis of value differs from reality (e.g., uncertainty over validity of rights), but the preferred solution is better information.
- c. Determine whether a market in unregistered land rights exists and, if so, its nature and extent. This stage requires the collection of market transaction information, notwithstanding the point made in b. It also involves an assessment of risks. These might be systematic risks, such as state involvement, macroeconomic volatility, capital controls, political change, war and civil unrest, regulatory change, poorly defined or enforced legal rights, lax accountancy controls, coercion and corruption. Or they might be specific risks associated with owning or occupying unregistered land, such as the effect of tenure uncertainty, transferability, transaction delay, risk of loss, cost of indemnification, cost of conflicting claims and dispute resolution.
- d. Estimate market value. Established revealed preference methods include comparison, income capitalisation. There are statistical methods too, such as hedonic pricing. Valuers should examine the circumstances of sales to ensure they can be used as evidence, and in so doing should become aware of what values drove the reasoning by the respective parties that resulted in their sale agreement.
- e. In so doing, the valuer should, over time, gain evidence and experience in values that did and did not come into play, and if the former to what extent, and their overall impact on the value. The resultant understanding can then inform the sale's usefulness as evidence in terms of the requirements of the market value definition.
- f. Identify any non-market value. This might entail a pluralistic approach: economists recognise option values, existence values, bequest values (but these individual non-market values don't capture collective choices (Gowdy, 1997). Non-monetary value based on social rather than individual decisions.
- g. Quantify (monetarily) or recognise (non-monetarily) non-market value. When estimating non-market value, valuers should seek to compare like with like, except in this context they must realise that money is not the typical means of exchange. Valuers need to display broad and deep vision, and exercise balanced judgement when assessing the lives, places and values under consideration. This requires the valuers to be skilled in tackling complex as well as complicated tasks, and the inter-relationships of all kinds of relevant facts and values. Methods for estimating in financial terms the non-market value of these rights, e.g., rental value (life interests), replacement cost (existing use), alternative use value, synergistic value, contingent valuation methods such as WTP and WTA. Methods for recognising non-market value, e.g., area-based valuations, include points-based valuations, composite index-based valuations.

As an example of how this process might work, it is helpful to consider the estimation of non-market value when assessing compensation for expropriated land. This area of valuation work reveals the shortcomings of market value since, as Rao et al (2017) argue, the wellbeing contribution of land extends beyond its market value and compensation for expropriation should cover these losses.

Although difficult to quantify, compensation for non-market value might take the form of a discretionary payment that would be dependent upon the length of time a claimant has occupied the land and inconvenience likely to be suffered when dispossessed. Issues related to cultural norms, values and beliefs, particularly in relation to customary land, should be considered (Manda & Banda, 2023; Salleh, 2024). Some of the benefits of location-dependent networks may be tradable and therefore can be assigned a market value. Other benefits may not be tradable but nevertheless have significant non-market value, for example, place may be essential to identity construction (which may be fundamentally communal and only secondarily individual) and resettlement involve sociocultural disruption, and economic and other competency disruptions (Scudder 1996, 2020)

Religious sites such as sacred trees, shrines and mountains have spiritual value to resident populations, but they are not traded so there is no concept of value-in-exchange. An alternative basis of compensation is therefore required. This might be an equivalent building in the case of a meeting place for religious worship. Alternatively, the compensation might cover the expense of identifying and acquiring a new site plus the cost of constructing a suitable building and appropriate disturbance compensation. In the case of burial grounds and other sacred places financial compensation is unlikely to be appropriate. Instead, avoidance and/or mitigation measures should be considered.

For valuations for expropriation purposes, the following general guidelines could be stated as:

- The valuation process should be participatory and minimize conflict and stress on affected parties.
- The cost of the valuation of the affected property should be borne by the expropriating authority, but the valuation date should not be set by the acquiring authority. It has to be gazetted.
- The process should provide for resolution of disputes over value and transparency of the valuation process.
- Valuers should ensure that compensation is fairly and expediently agreed, and provide, if possible, an early indication of the amount of compensation likely to be awarded.
- Estimates of market value should be based on openly agreed transaction prices where possible. And not based on values set by the State for other purposes such as land and property taxation as these may not fully reflect the 'loss' of real property rights and may have far lower due diligence requirements.
- Valuers should take non-market value into consideration. Not all value can be monetized but should be recognised, and compensation can include resettlement, or substitute accommodation.

## 6. Conclusion

The recognition of informal land rights by the global land administration community affords opportunity to further refine the process of the valuation of non-market values. The adoption of fit-for-purpose approaches to land administration leading to the recognition of non-market property rights, will need a way to quantify these rights. This paper seeks to fill this gap and outline an approach.

The requirements of for the recognition and estimation of non-market value were drawn from lessons learnt from case studies in different parts of the world, especially in the Global South, as well as from professionals, researchers, and civil society on the way informal markets outside conventional land administration operate in both the rural customary and urban informal contexts. Lessons were also derived from previous and current projects, which identified the policy and some valuation-related remedies for fit for purpose valuing of unregistered lands in the Global South.

The resulting principles derived from the cases – local understanding, subjectivity and participation – lay the foundations for the suggested approach to the valuation of non-market values, namely: identify the real property rights, collect appropriate land and property data, determine the existence of a market and quantify market value, determine and quantify any non-market values, whilst having regard to any risk and uncertainty.

Future research on this theme will refine the proposed approach by consulting with larger stakeholder groups, conducting awareness raising activities, identifying local projects to pilot the process, tailoring it to different contexts, as well as incorporating the institutional and socio-political economy into the process and investigating approaches for funding, training, and material resources. It is recognised that many positions held in this paper are more nuanced in the real world, and so a series of pilot projects will help identify the inputs and options that can be incorporated to suit particular local contexts. This paper is a first step towards the development of a framework based on the knowledge and experiences continuously acquired to focus on the debate for the future. Further online engagement with property valuation and legal professionals will inform the plan for dissemination, including a proof of concept to derive case studies, and further refinement of the process, tuned to specific regions and learning from lessons will be undertaken.

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Appendix 1:

Approach	Valuation Form	Primary Values Addressed	Key Contribution	Principal Limitation
Revealed preference (market comparison, income, hedonic)	Monetary	Economic use values	Anchors valuation in observable transactions	Excludes non-traded social and ecological values
Contingent valuation (WTP/WTA)	Monetary	Use, option, existence values	Enables monetisation of non-market benefits	Bias, strategic responses, ability-to-pay effects
Choice modelling	Monetary	Economic, social, ecological attributes	Values trade-offs between land attributes	Methodologically complex; respondent burden
Replacement cost / alternative use	Monetary	Livelihood and functional values	Practical where markets are absent	Weak welfare basis; ignores intrinsic value
Points-based valuation	Non-monetary / hybrid	Sociocultural and livelihood values	Transparent relative valuation without monetisation	Subjective weighting; limited comparability
Composite index approaches	Non-monetary	Social, cultural, ecological capital	Captures plural and incommensurable values	Not directly convertible to compensation
Citizens' juries	Non-monetary	Collective social and cultural values	High legitimacy through deliberation	Resource-intensive; limited scalability
Community valuer approaches	Non-monetary / hybrid	Subsistence, identity, communal rights	Embeds local knowledge and trust	Internal power asymmetries may persist
Plural valuation frameworks	Hybrid	Economic, sociocultural, ecological	Integrates multiple value domains	Challenges standardisation in practice

The comparative table above shows a clear difference in the approaches that attempt to monetise non-market values and those that seek to recognise them without reducing them to a single number. Though inadequate in capturing sociocultural and ecological values, especially where land rights are communal and/or unregistered, monetary based approaches hold domination in conventional practice due to their easy alignment to compensation and decision-making frameworks. Hybrid and non-monetary alternatives seek to fill this gap by advancing participation, local knowledge, and value plurality to enhance equity and the belief in the process. Hence the results point to a

plurality of valuation approaches and frameworks as the most robust basis for the fair valuation of such assets.