Theres something wrong with EMMA: the information gaps in supply side of market based humanitarian response.

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Abstract

Relief organizations are encouraged to understand, support, and make use of local market-systems before, during and after a crisis. Doing so supports economic recovery of the affected population and contributes to positive socioeconomic change. However, during a sudden-onset emergency, there is little time to assess and map markets to enable market-based programming. In the last 13 years EMMA and PCMA tools have become sector-standard to produce "rough and ready" market analyses. In this paper, a meta-analysis of published EMMA and PCMAs uncovers a skewed focus on the demand side of market-systems, (re)producing information gaps which limit relief organizations from engaging markets in supply side projects, such as local procurement. The paper offers some suggestions for refocusing the tools for both users and researchers, to meet the informational needs for humanitarian procurement.

Keywords: humanitarian supply chain management; tool and methodologies for humanitarian crisis management; markets in crisis; local procurement; local market engagement

1 Background

A market system is a network of actors engaged in producing, exchanging and consuming a particular (or a type of) item or service. This may include producers, suppliers, processors, vendors, buyers, and end users. The market system encompasses various forms of infrastructure, inputs, and services, and operates within the context of rules and norms that shape this system's particular business environment. As such, a market system is more than a supply chain or a particular organizations logistics, constituting the backdrop of these activities in their entirety.

Market based programming is widely considered best practice in the humanitarian Market based programs work through and support local markets, and are favored over other interventions for their ability to kick start economic recovery and support livelihood development. As such, relief organizations must be market orientated, aware of and close the market systems they regularly act in, to pro-actively strengthen and develop those markets. As such, humanitarian organizations commonly implement short-term market-integrated relief to reach beneficiaries following emergencies – such as through cash and voucher interventions. Recovery activities also regularly include short-term targeted support to market actors that restore the market system after a crisis. Development actors are also encouraged to engage in 'market strengthening and development' to build resilience and strengthen livelihoods in communities.

Emergency Market Mapping and Analysis, or EMMA, is a toolkit designed for humanitarian organizations to assess and understand the state of market-systems immediately after sudden-onset emergencies (eg conflicts, natural disasters). The toolkit was first published in 2010 and aimed to assist humanitarian organizations to make use of local market systems, improving the quality and impact of emergency responses, and engaging early recovery. Since then, the methodology has been readily accepted in practice and conducted in more than 25 countries, with the participation of more than three dozen international and national-level NGOs and UN agencies. The EMMA methodology is designed to support decision makers. EMMA is, therefore, designed for adaptable application in any humanitarian crisis, including sudden-onset, cyclical, or chronic, for any market system, and in any culture or context, be it conflict, natural disaster, or displacement.

The EMMA requires the team find a 'critical market system', which are those which played, play or could play a major role in ensuring survival, and/or protecting livelihoods. These are selected with specific ideas and expectations about the operational value of the EMMA for a target population. The EMMA ties the market with the item, crop, product or service which the organization is interested in. While the handbook also includes a consideration of market systems that provide a direct source of urgently needed income, it also explicitly allows for teams to choose the market system based on the agency or donor interest or mandate (criterion 3) and plans (criterion 5). The market systems are understood in silo, by design. The EMMA handbook suggests that each market system is mapped and analyzed separately. The EMMA team must have the product in mind before the EMMA not after. As such, the supply mapping is already ringfenced within the known existing supply and the method does not push practioners to explore un-leveraged supply.

The first step in EMMA is mapping, for which a rural market map framework has been used. This approach includes a visualization of market chain actors, their links, the environmental factors, and the service providers, usually jointly drawn by the EMMA team and key stakeholders or interested parties. In the reviewed EMMA dataset, XX were rural-based assessments. This paper therefore suggests the mapping approach is maybe ill-suited for urban and peri-urban responses. Additionally, the market map approach seeks to help stakeholders understand the ways they are mutually benefit from improving systematic efficiency (Albu and Griffith, 2005). The method is seeking to understand demand to be filled, not existing supply. In EMMA handbook, a distinction is made between the supply chain and the value chain, with a focus on establishing the links between supply chains and income streams which enable households to access or demand those service or goods. The second phase of the mapping is to focus on the service infrastructure, but again the focus is on those affected by the emergency situation, and not on those that remain after the disaster has strike.

In 2014, the PCMA (Pre-Crisis Market Analysis) was introduced as an alternative methodology to assess markets before a crisis. The initial PCMA guidance was developed with ECHO ERC and USAID funding, by Oxfam and IRC, in response to the systematic failures highlighted after the 2011 crisis in the Horn of Africa. Key reports suggested the traditional methods of the contingency planning and early responses were not based on livelihood and market analyses, which meant that humanitarian agencies did not understand the basic market system dynamics they were entering. The PCMA was not intended to replace the EMMA, or any other market assessment tool, but rather to complement them by providing a pre-emergency analysis of how market systems "normally" function.

In 2016, a revised PCMA guidance was produced by the IRC with funding from USAID and input from several agencies and individuals across sectors and from governance. The EMMA methodology fed directly into the Market Based Programming Framework (MBPF), which was developed by the Markets in Crisis (MiC) Community of Practice in 2015, to unite and enable projects that work through and support local markets or contribute to positive market systems change. As of 2021, USAID has decided to merge the Markets in Crisis and EMME Toolkit, developing a consolidated, knowledge management platform for market analysis and market-based programming in emergency, recovery and development circumstances.

2 Methodology

In the broadest sense, the literature considered in this study is grey, in that the reports are not a produce of peer-review processes for publication in scientific journals (Lawrence *et al.*, 2014). This is not to say, however, that the data set is not of scientific value. The inclusion of non-white literature has a myriad of benefits for fields of research, including the potential to weigh against publication bias (Kepes *et al.*, 2012), which results from the suppression mechanisms inherent in peer review and which result in a body of literature which is systematically unrepresentative of the whole (Rothstein *et al.*, 2005). The inclusion of grey material as data for review is also pertinent as it is usually through such literature, for example conference papers, ongoing research, reports, theses or dissertation, that the important interim findings or negative results are collected and disseminated which is important for comprehensive understandings (Paez, 2017).

In humanitarian response, and more specifically in humanitarian logistics and supply chain management, it is becoming commonplace to include grey material as data for scientific review. There are examples in humanitarian waste management (Tuomala *et al.*, 2022), in humanitarian transport (Azmat and Kummer, 2020), and in the

discourse on localization (Frennesson *et al.*, 2021), among others. The inclusion of non-white literature is particularly pertinent for humanitarian research as two specific reasons. Firstly, the vast majority of available material for review is grey as these academic fields are relatively new. Secondly, the humanitarian sector moves extremely fast such that the time-lag instantiated in the process of peer review detrimentally impacts the findings value to the sector. For example, during the acute phases of COVID19, scientific research on the response were desperately sort after, whereas now the appetite for the information has somewhat subsided leaving researchers specialized in pandemic response a smaller window to publish findings. It is reasonable that researchers would forgo white publication in favor of disseminating interim and relevant results in grey literature. .

The paper provides a quality assessment for the dataset, according to the Kepes taxonomy(Kepes *et al.*, 2012), which suggests evaluating the source expertise (i.e. the extent to which the authority of the producer of content can be verified) and the outlet control (the extent to which content is produced, moderated or edited in conformance with explicit and transparent knowledge creation criteria). This categorization recognizes that the expert community can generate literature of scholarly interest and allows for the author to document and make explicit judgements around the relevancy of the grey literature (Adams *et al.*, 2017).

The author is a trained EMMA facilitator with experience running both methodologies in the field. In addition, for this paper, she attended refresher classes on conducting quality EMMA and PCMA and consulted the leadership manual throughout. The source of expertise is known and highly relevant. A sample of authors were taken from the dataset. These constituted a range of international and national nongovernmental organizations, as well as a private sector consultancy firm. The training expectations for completing a report to submission were verified through a target search of job adverts for similar market assessments. The EMMA toolkit website remains the hub for all information on this approach, which is industry standard. However, the source does not publish their control standards widely, so the outlet control is not certain. The methodological guidance must be adhered to qualify as an EMMA or PCMA report for dissemination through the outlet. Overall, the author grades the quality of the grey literature as between 1st and 2nd tier (see Figure 2).
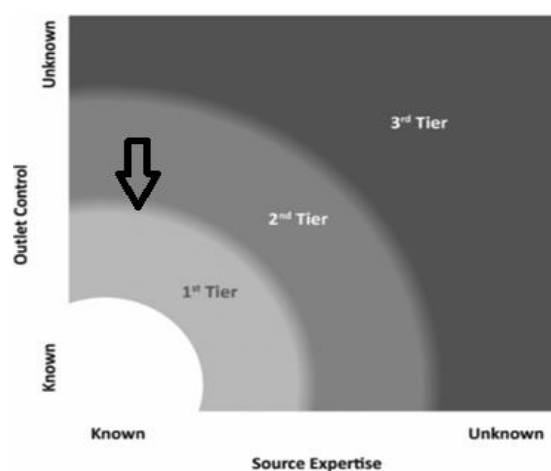
Figure 1 Adams et al. 2017 graph with added arrow by author

A dataset was drawn from the last 10 years of published EMMA and PCMA (source: https://www.emma-toolkit.org/), from 2013-23. Of these four (4) were duplicates and two (2) were discarded as they were an executive summary of another report. The final dataset included 60 reports, 38 of which were EMMA from 2013-2023 and 22 of which were PCMAs from 2014-2023. The data set included both French (12) and English (47) reports and both languages were admissible. (see Figure 3).
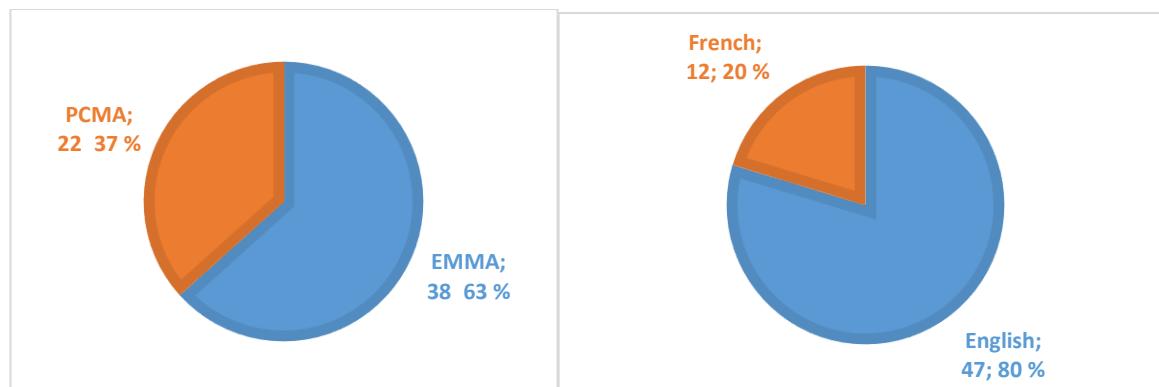
Figure 2 Pie charts showing division of report type (L) and language of publication (R)

2.1 Content Analysis Framework

The content analysis framework was deductively derived from the MBPF. This framework (see Figure 4) includes supply and demand functions (purple and red), where market actors exchange goods and services, policies, norms, and supporting environment for market activities (blue) and infrastructure and services (green). Within this framework, different modalities for engaging markets in response are listed. The framework suggests that during emergency relief phases the market system can be used, then supported during recovery, and eventually changed during resiliency work. Modalities for how to do this are suggested throughout the framework, for examples providing cash to households (HH) is listed as a demand side or access side use of markets suitable for emergency relief, while enhancing the capacity to improve production quality is suggested as a supply or availability side market system change suitable for resiliency building.
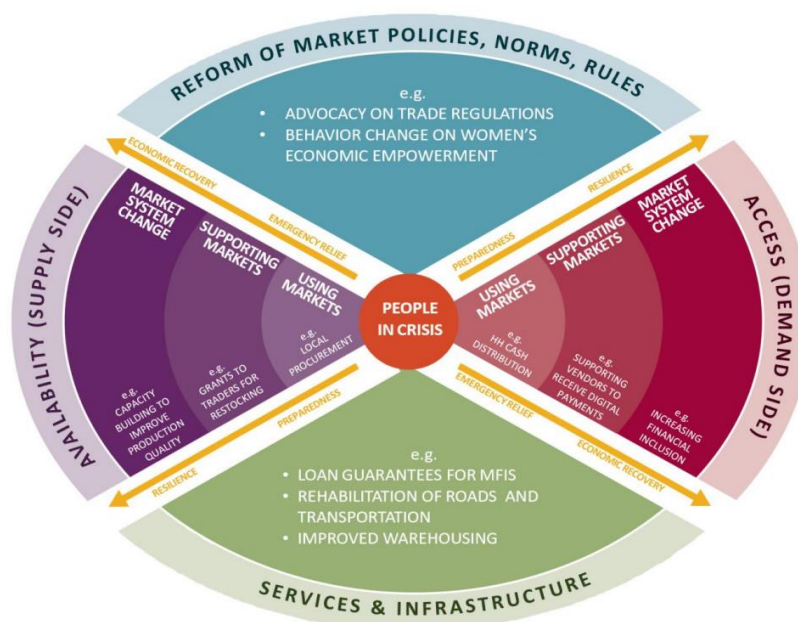

Figure 3 MiC Group (2022) Market-Based Programming Framework

A codebook was deductively derived from the MBPF, producing five (5) parent codes with which to analysis the content (Linneberg and Korsgaard, 2019; Pearse, 2019). Each is explained in more detail, including some of the questions and sub-codes, to enhance replicability of the study (Roberts *et al.*, 2019).

1. *People in crisis* (orange). Defined as*:* The target population, discretely described, the market system, discretely described, and the ways in which the crisis, discretely described, which is affecting them. Examples: *What is the market system(s)? Who are the target population? Are they area-specific? Is the target population crisis specific? Is the crisis manifest, unfolding, or complex? Is there more than one crisis affecting the target population? Is the target population age or gender specific?*
2. *Services and infrastructure* (green). Defined as*:* The material institutions, including the infrastructure services, available to the community or individual, and how the crisis has affected them. Examples: *What is the connectivity between the target population? How are the roads and transportation links affected the crisis, and what ways does this impact the people in crisis (1)? Which aid organizations or long-term development actors are in the system and what do they (claim to) provide? What capacity for inventory storage exists in the system and its supply chain, and has this been impacted by the crisis?*
3. *Market policies, norms, rules* (blue). Defined as*:* The immaterial and social institutions which influence the market system, and how the crisis has affected them. Examples: *What social welfare or social safety nets are available, and to whom? Which advocacy groups exist and who do they advocate for and to? Are there social norms around market engagement and spending, and how have these been impacted by the crisis? Which policies, processes or soft norms which the institutions are obliged to follow?*

4. *Access, demand side* (red). <u>Defined as</u>*:* The patterns of consumption, investment and expenditure by actors and institutions in the market system, and the ways crisis has impacted, change, or terminated these. *Where access/demand side interventions recommended in the report?*
    a. *Using markets*. <u>Examples</u>: *Who and how are people in crisis using the market system? How have spending habit changed since the crisis, and why?*
    b. *Supporting markets.* <u>Examples</u>: *Are there any areas of high demand, where items or services are needed but not available, and were they there before or after the crisis?*
    c. *Changing markets.* Examples: *Who is not engaging with the market system, and why? Are any social groups are excluded from purchasing due to social taboo or stigma? Which institutions have control of access to markets, and how do they impact individual access to markets?*
5. *Availability, supply side* (purple). <u>Defined as</u>: The patterns of production, procurement, and buying by actors and institutions in the market system, and the ways crisis has impacted, change, or terminated these. *Where availability/supply side interventions recommended in the report?*
    a. *Using markets*. <u>Examples</u>: *Where and from whom are the products and services being sourced in the market system?*
    b. *Supporting markets.* <u>Examples</u>: *Are there any general gluts, an excess of a particular item or service, in the system, and were they there before or after the crisis?*
    c. *Changing markets.* <u>Examples</u>: *Has the quality of the item or service been impacted by the crisis? Which institutions have control of the quality expectations, and how do they implement them?*

3   Findings

People in Crisis. The content analysis found that the EMMA and PCMAs the reports were characterized by a clear understanding of the target population, who were usually area-specific, and the market system of interest. The majority of published EMMA and PCMAs were interested in food market systems (38), either exclusively (16) or partially (e.g 4 with Water, 7 with Agricultural or Livestock, 3 with Labor). Where an assessment was conducted on multiple market types, this reflected the natural overlap in these markets, for example in food and livestock or food and fishing. However, there were examples in the dataset of a targeted assessment conducted on a specific market overlap, for example a study into sorghum and maize, but also soap market systems (27-14) and another into fish, rice, sesame, maize, sweet potato, cassava and also bleach market systems (51-16). These assessments may reflect the unique market contexts of those overlaps as well as the goal-orientated nature of the methodology. In these cases, the assessment is used as a baseline or as an exploratory study to inform a particular market-based project of interest to the author organizations (e.g. cash to households). The context and crisis of interest in each report was clear but was as often rooted in scenario building as in real crisis response.

Services and Infrastructure. Many of the reports included a desk review of the government services and pre-existing national infrastructure. For example, many reports how the crises affected the capacity of the ports and points of entry, or which pre-existing social welfare or support services the target population was accessing. There were a few outlier reports which exclusively focused on the mapping of services, including using geographical information systems (GIS) or price mapping to inform the report. The services and infrastructure required for accessibility, such as transportation capacity and routes to distribution were commonplace across the reports, independent of the market system targeted. It was, however, irregular for the reports to consider the supply chain infrastructure and logistics services which support availability in the market system, for example, warehousing and storage capacity.

Market policies, norms, rules. Reports included immaterial and social institutions in vague or abstract ways. Very few reports dealt with the legal or social norms which may be pertinent to understanding the market system dynamics. Most common was an assessment of the legislative and taxation customs which impact business continuity and import constraints of certain items. There was a more infrequent inclusion of social taboo of purchasing items, for example certain hygiene management items. Where reports included a protection lens, usually in a crisis context, gender-based violence was commonly listed as a barrier to access side of the market system for women and girls. Presumably the same would hold for barrier to availability on the supply side of the market, but this was not made explicit in the reports.

Access and Demand Side. Throughout the dataset, there exists a heavy focus on access and demand side dynamics. The reports did not include a needs assessment, which is the a crisis-specific demand estimate generated by the humanitarian community after an emergency is declared (see MIRA). All the reports, however,

included an explicit focus of the ways in which conflicts impact access to and demand within a market system. In most cases this impact was negative, making market systems either physically, financially, or socially inaccessible. In a minority of reports, the crisis improved physical access to markets, by relocating people closer together or making travel easier to access (47-16). The majority of programme recommendations in the reports were interventions in the access and demand side of the market system. Advice around providing cash or vouchers were disproportionately found in the reports. Other advice included incorporating financial inclusion strategies, micro-finance initiatives such as VSLA and SILCs, and equipping vendors to receive vouchers/digital cash as payment.

Availability and Supply Side. Throughout the dataset, availability and supply were supplemental to the access and demand information. Supply issues were included in light of the demand, or as an impact of the crisis. In some reports, the impact of the aid response on availability and supply was described, with increased supply developed by the unannounced arrival of relief items into the system as having created a disincentive for the commercial supply side activity (48-16). Some reports considered the supply side of the market system in order to inform or verify the suitability of aid and relief items, benchmarking types of items to those locally available in sufficient quantities within local markets which are regularly purchased by the target population (47-16). Where reports included supply chain mapping, many stopped at vendors, both informal and formal, and their wholesale suppliers. Importers and manufacturer were rarely considered, and producers were only commonplace where the report included livelihood or labor in the market system explicitly. Programme recommendations in the reports seldom suggests interventions in the supply and availability side of the market system. A few reports suggested local procurement would be possible, however there were no regular suggestions of other market-based programming such as front financing producers or wholesales, improving national quality standards, or enhancing transport and infrastructural capacity.

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