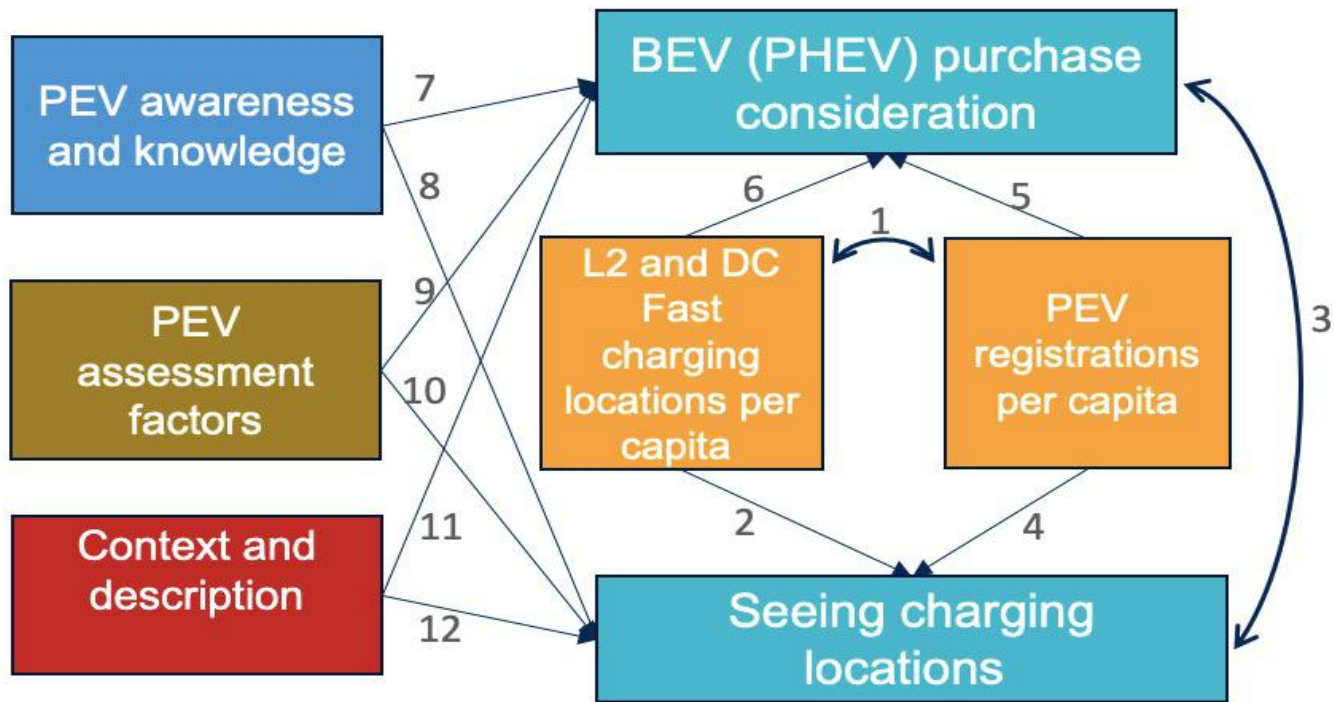


Introduction: Growth of PEV charging Infrastructure and PEV sales



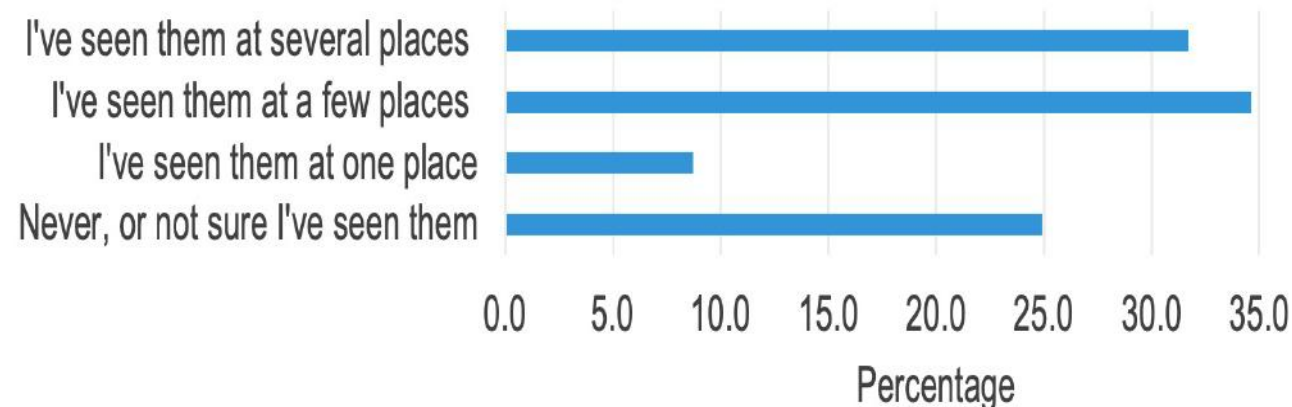
In this framework, public charging is a key facilitator of PEV market growth. However, this assumption has not been sufficiently tested.

Structural Equation Model Framework

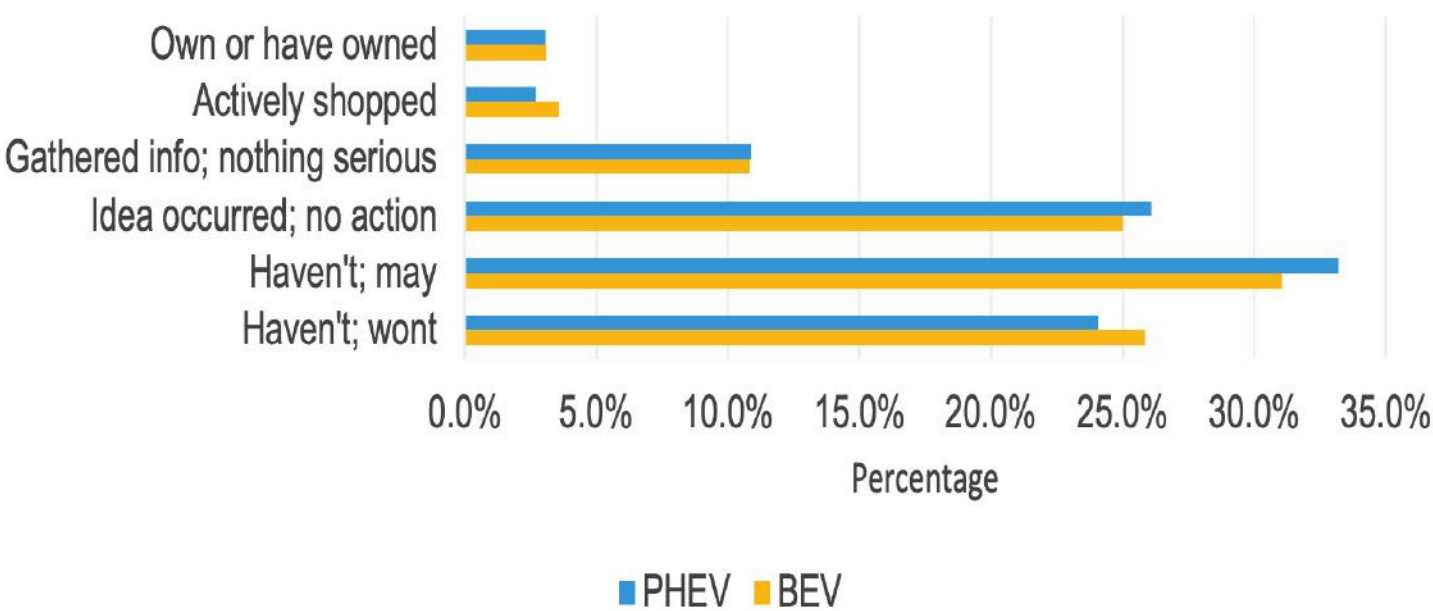


- First, we allow for the relationship between charging infrastructure and PEV registrations per capita to covary (Path 1)—without stipulating one causes the other. Then, we start to add people to the model, beginning with the question, “Is more charging associated with more people seeing charging?” (Path 2). We add relationships between both people seeing charging locations and their consideration-to-date of acquiring a BEV (PHEV), and per capita variation in both charging locations and PEV registrations. (Path 3-6). Lastly, we add information about consumers’ awareness, knowledge, assessment of PEVs, and contextual and descriptive variables (Paths 7 – 12).

Distribution of Seeing Public PEV Charging: "Of the parking facilities you use, in how many have you seen PEV charging?"



Distribution of BEV and PHEV Consideration: “Have you considered buying an PEV for your household?”



Impact of charging location density

- We find there is no statistically significant relationship between public charging location density and participants reporting they see PEV charging locations (Path 2), or considering purchasing a PEV (Path 6).
- Further, we find no statistically significant relationship between seeing charging locations and PEV purchase consideration (Path 3).

Variables which increase PEV purchase consideration and charging location awareness (Paths 7-12)

Knowledge and Awareness	Positive Assessments of:	Context and Description
<ul style="list-style-type: none"><li>Able to name a BEV (PHEV)</li><li>Correct knowledge of PHEV refueling</li><li>BEV (PHEV) familiarity</li></ul>	<ul style="list-style-type: none"><li>BEV (PHEV) Charging access</li><li>BEV (PHEV) Charging duration and range</li><li>BEV (PHEV) Marketability</li></ul>	<ul style="list-style-type: none"><li>Having HOV lane access</li><li>More household vehicles (BEV model)</li><li>Having electricity access at residential parking spot</li></ul>
<ul style="list-style-type: none"><li>BEV (PHEV) experience</li></ul>	<ul style="list-style-type: none"><li>BEV (PHEV) Reliability and safety</li></ul>	<ul style="list-style-type: none"><li>Being young</li></ul>
<ul style="list-style-type: none"><li>Has sought info on PEVs</li><li>Has had a positive convo with BEV (PHEV) owner</li></ul>		<ul style="list-style-type: none"><li>Higher income</li><li>Being female</li></ul>
<ul style="list-style-type: none"><li>Correct knowledge of BEV refueling</li><li>Incentive awareness (PHEV model)</li><li>Advertising awareness</li></ul>		<ul style="list-style-type: none"><li>More household vehicles (PHEV model)</li></ul>

Legend: Both purchase consideration and charging location awareness (green), Purchase consideration only (yellow), Charging location awareness only (blue).