



# The financial benefits of programmatic technology and AI in recruitment advertising

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**Aggregators are the most popular and effective platform for recruiters to advertise their jobs, but they are not without flaws.**

**We carried out 4 tests to demonstrate the financial benefits of using aggregators, programmatic software and artificial intelligence (AI) to improve how they work.**

**This white paper looks at the results of each test and the implications for recruiters.**

## Welcome

Welcome to the second in our series of ClickIQ white papers, where we evaluate the financial impact of moving to a pay-per-performance recruitment advertising model, and the effectiveness of using different Programmatic strategies and Artificial Intelligence.

The paper gives recruitment advertisers a detailed view of the efficiencies that can be gained by employing each of these strategies, broken down by different types of Job roles.

## Section one

# The pros and cons of job aggregators

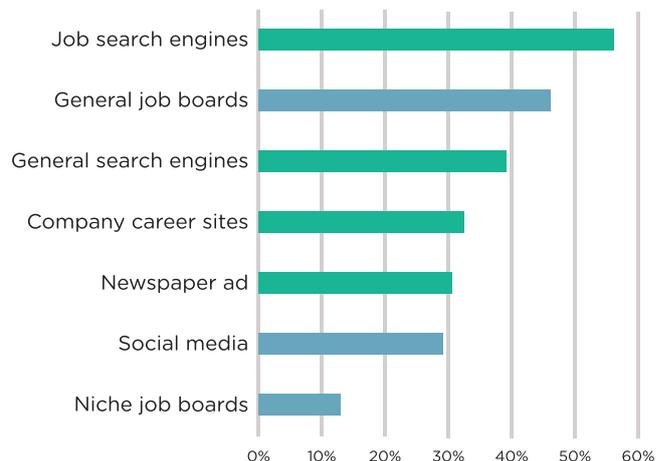
Job aggregators are search engines designed to pull job postings from a multitude of job boards and career sites so that they can all be viewed in one place. Like Google, search results normally start with sponsored jobs that recruiters have paid for, followed by organic results that are arranged according to how relevant they are to the search query.

Traditional job boards, on the other hand, are like newspapers selling individual job slots, only displaying jobs that companies have paid for, normally on a duration basis.

There are a range of advantages of using aggregators instead of traditional job boards for recruitment advertising:

- **Access to more job seekers** — by hosting thousands more jobs than a traditional job board, aggregators are ranked higher in Google, allowing advertisers access to a much larger audience of job seekers. A 2016 Global Job Seeker Survey found that 57% of UK job seekers use aggregators more than any other method to find and apply for jobs.
- **Lower advertising costs** — recruiters pay for job ads on aggregators using pay-per-click, a performance-based model that is typically a lot cheaper than duration-based advertising on a job board.
- **You get what you pay for** — duration-based advertising involves paying a specified sum for a specified length of time regardless of how many responses you're getting. If you don't get many responses, you still pay the same amount. Pay-per-click means you're only paying for responses, i.e. clicks. It also means you can control and manage your spend better by adjusting the cost per click, up or down.

### Job seeker survey



### But there are a number of downsides:

- **Your spend curve is inverted** — pay-per-click can lead to more budget being spent on higher responding, easier-to-fill roles, and less on the hard-to-fill ones. Logically this ought to be the other way around.
- **Too many applicants** — recruiters are inundated with unsuitable candidates for easy-to-fill roles, having to spend time and money filtering through them.
- **Complexity** — trying to properly manage your pay-per-click ads, in order to avoid the scenarios mentioned above, is extremely complex and time-consuming without software.

Recruiters need some way of monitoring and optimising their bids on every job, on every aggregator, every few hours. Enter programmatic software.

## Section two

# Demonstrating the benefits of optimising your spend on aggregators

We carried out 4 tests to explore the financial effects of using performance-based pay-per-click ads on job aggregators on overall recruitment spend.

Test 1 demonstrates the benefits of moving from a pay-for-time model to a pay-for-performance model by adopting pay-per-click (PPC).

Test 2 looks at the effect of barebones PPC without any software-enabled optimisation, compared to PPC with the addition of a simple programmatic strategy.

Test 3 compares PPC with the same programmatic strategy across all aggregators to PPC that is optimised to perform differently on different sites.

Test 4 looks at PPC with a normal programmatic strategy compared to PPC with a programmatic strategy that has been enhanced by AI.

### Methodology

We created a basket of jobs representative of a typical organisation. Our research shows that typical organisations have 30% hard-to-fill 'skill shortage' jobs, 30% easy-to-fill 'high responder' jobs, and 40% 'normal' jobs (which are somewhere in between), so we ensured that our sample of jobs was proportionate to these figures.

In Test 1, we advertised these jobs across a number of generalist and niche job boards using traditional duration-based advertising. Then we took the same jobs and advertised them on aggregators using PPC. Having benchmarked the number of responses in the first method, we carried out the advertising on the aggregators till we had reached the same number of responses.

In Tests 2, 3 and 4, we re-advertised the jobs on the aggregators and applied each of the different optimisations to compare and contrast their effects.

Conversion rates varied from job to job and included some low converters, indicative of a problem with the application process (e.g. too long or complicated), or with the job itself (e.g. the salary is too low).

We have made several assumptions in order to make the data as fair and effective as possible.

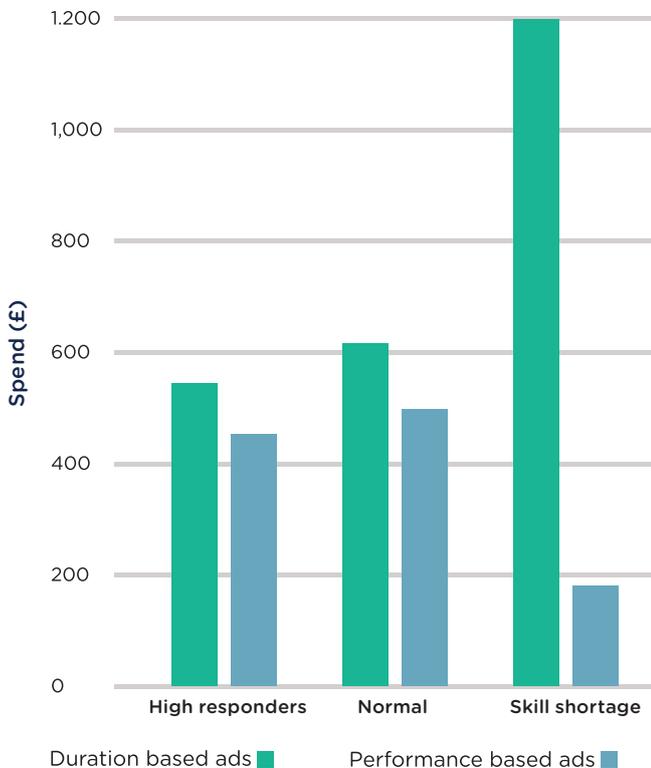
### Test 1 Paying for time vs PPC

This test measures the efficacy of duration-based ads on traditional job boards against the efficacy of basic PPC on job aggregators (without any software-enabled optimisation). This is in order to establish the benefits of moving from a pay-for-time model to a pay-for-performance model.

As mentioned, we have based this test on the same adverts attracting the same number of responses across both platforms.

	Duration-based ads		PPC ads		Savings
	Spend (£)	% budget	Spend (£)	% budget	
High responder	£536	20.8%	£442	34.3%	17.6%
Normal	£629	32.6%	£500	51.8%	20.5%
Skill shortage	£1,198	46.6%	£179	13.9%	85.0%
				<b>Savings</b>	<b>49.9%</b>

## Spend comparison: Aggregators vs Job boards



As you can see, PPC ads produce a 49.9% savings across the board. This is largely because of the 85% saving on skill shortage roles. However, the spend curve is wrong because now more budget is being apportioned to normal and high response roles than skill shortage roles, which doesn't make any financial sense. Additionally, savings on the easier-to-fill roles are a lot smaller than they should be. (In fact, if you negotiated the traditional job boards down on their advertising rates, savings would in all likelihood be non-existent.)

## How effective is this strategy?

- PPC is most effective for skill shortage jobs and far cheaper than duration-based ads.
- PPC is less effective (and can sometimes be more expensive) for high-responder roles.

## Test 2 PPC ads with or without simple programmatic rules

This test measures the efficacy of barebones PPC without any software-enabled optimisation against PPC with a simple programmatic strategy, in order to establish the benefits of using programmatic software.

We ran a comparison of two PPC campaigns, one regulated and optimised by programmatic software, and one not.

For the optimised campaign we took a differential pricing approach, bidding more for the skill shortage role and less for the higher responding jobs. Specifically £0.15 per click for High responders, £0.25 per click for normal jobs, and £0.40 per click for skill shortage jobs.

We put in place a simple rule for the programmatic campaign, namely that we wanted a maximum of 25 applications for all jobs. (This means that when a job hits 25 applications, the software removes the ad, preventing you from having to pay for any further clicks.)

We chose a maximum of 25 based on research that shows on average 1 in 5 applicants are of interview quality, and 1 in 5 interviews result in a hire. Thus 25 applications should produce a hire at the end of the campaign.

## Spend: Before and After Programmatic

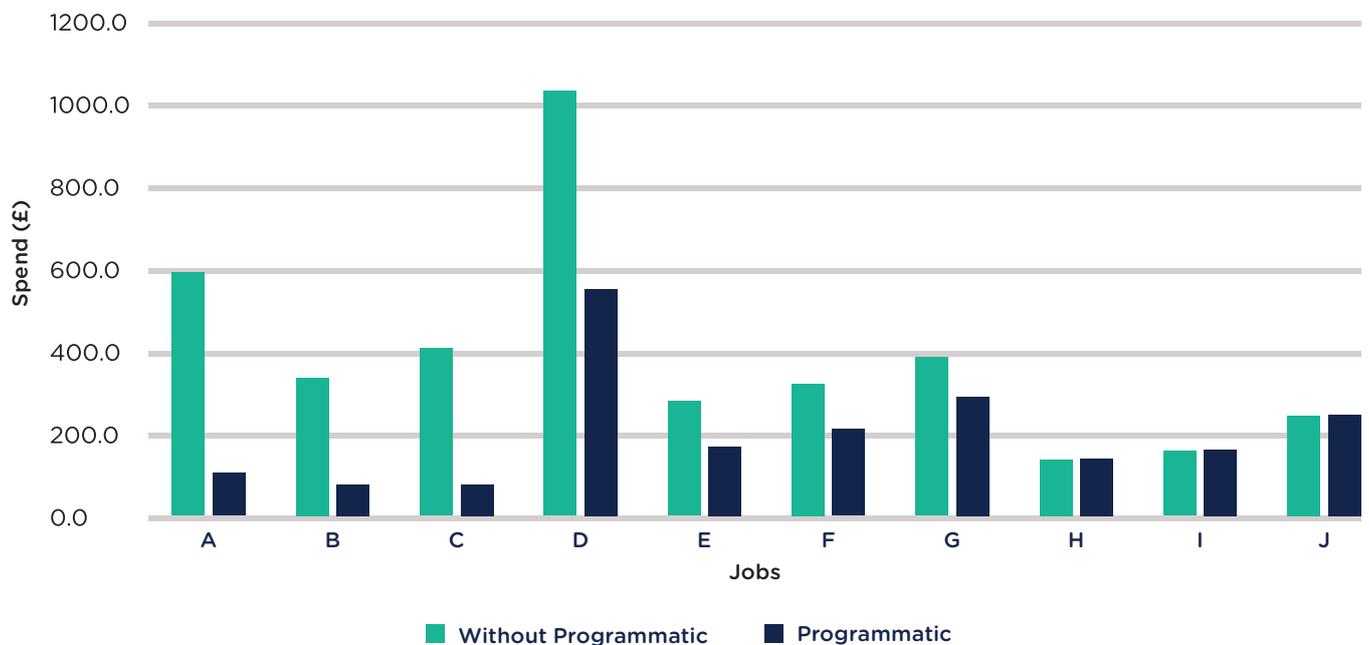
This time the biggest savings are on the high responder roles (82%) and the spend curve has more or less corrected itself. Generally more money is being spent on skill shortage roles than high responders, which is how it should be.

We say more or less because Job D disrupts the spend curve. This job receives more clicks than any of the other roles, but far fewer applications. This is one of the low converters that we mentioned earlier. People are changing their minds about the role after they've clicked on it, which indicates either that the salary for the job is too low or the application process is too arduous.

You'll also note that Jobs H, I and J did not receive 25 applications in either campaign. This is because they are hard-to-fill jobs and didn't receive enough applications to have the maximum applications rule applied.

## How effective is this strategy?

- Programmatic software will ensure big savings on high responders.
- Programmatic software will correct your spend curve and ensure that more of your budget is apportioned to skill shortage roles than high responders.



### Test 3 Cross-media optimisation

This test compares PPC with the same programmatic strategy across all aggregators to PPC with a programmatic strategy that is optimised according to how each site performs.

This is to highlight how the strengths and weaknesses of different aggregators can impact your recruitment spend. If the conversion rate for the same ad is lower

on one aggregator than another, this indicates that the site has a lower-quality audience of job seekers. If you pay the same cost per click across both sites, you end up paying more per application on the lower-converting aggregator.

Programmatic software can be set to optimise across all aggregators, altering the cost per click (CPC) to correspond with the conversion rate and achieve the minimum cost per application (CPA).

Aggregator	CPC	Conversion rate	CPA	% Allocation	Clicks	Spend
Site A	£0.25	5.5%	£4.55	20%	800	£200.00
Site B	£0.25	5.3%	£4.72	20%	800	£200.00
Site C	£0.25	1.8%	£13.89	20%	800	£200.00
Site D	£0.25	7.1%	£3.52	20%	800	£200.00
Site E	£0.25	3.4%	£7.35	20%	800	£200.00
<b>Aggregator</b>						
Aggregator	CPC	Conversion rate	CPA	% Allocation	Clicks	Spend
Site A	£0.19	5.5%	£3.52	24%	800	£154.93
Site B	£0.19	5.3%	£3.52	23%	800	£149.30
Site C	£0.06	1.8%	£3.52	8%	800	£50.70
Site D	£0.25	7.1%	£3.52	31%	800	£200.00
Site E	£0.12	3.4%	£3.52	15%	800	£95.77
<b>Saving</b>						<b>35%</b>

You can see from the table above that £3.52 was the lowest CPA in our unoptimised campaign, courtesy of Site D, the highest-converting aggregator. We used this as our benchmark for the optimised campaign. The software then adjusted the CPC per aggregator, reducing spend on lower-converting sites and producing an overall saving of 35%.

### How effective is this strategy?

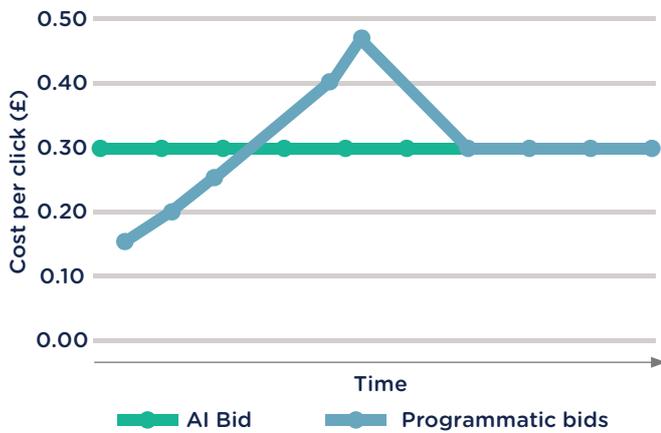
- While PPC produces savings on skill shortage roles, and PPC with basic programmatic produces savings on high responders, cross-media optimisation produces savings on ALL roles.

### Test 4 Programmatic software with or without AI

This test measures PPC with a normal programmatic strategy against PPC with an AI-enhanced programmatic strategy, in order to demonstrate the impact AI can have on recruitment spend.

Programmatic software is efficient and capable, but it isn't smart. It only works reactively, not proactively. It doesn't know what the optimum cost per click (also known as the bid price) should be, so it 'speculates' according to the responses it's getting and spends time and money while doing so. So although it's good, it isn't as efficient as it could be.

## Cost per Click Programmatic vs AI



Here we've compared a normal programmatic campaign to an AI-enhanced campaign. You can see the software 'speculating' in the normal campaign, but not in the AI campaign. This is because the AI already knows what the optimum bid price should be, having learned.

What AI does is it looks at past campaigns, analyses bid levels, site traffic, conversion rates and other characteristics, and uses this information to calculate the ideal bid price to achieve your campaign goals.

AI's biggest effects are on jobs listed for shorter periods. Programmatic software can take several days to find their optimum bid price. AI gets there a lot faster, typically improving full campaign optimisation speed by 5 days. That means you're looking at further savings of between 5 and 20%.

## How effective is this strategy?

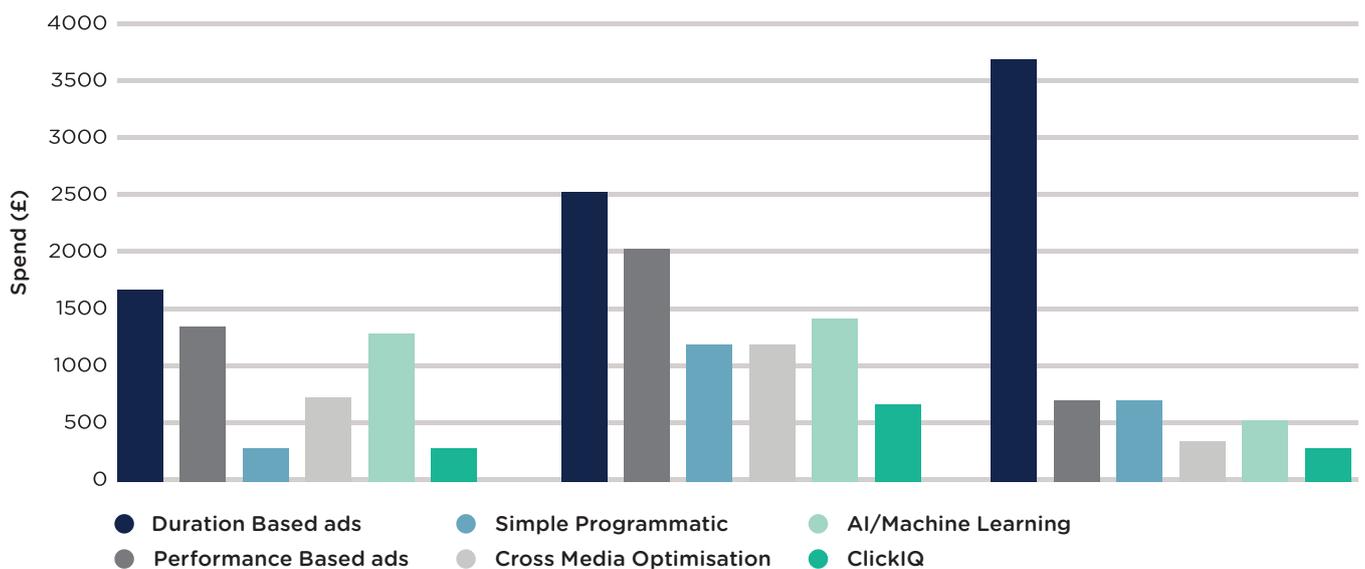
- AI makes programmatic strategies smarter and more efficient across all job roles.
- AI is most effective for shorter-duration jobs and improves campaign optimisation speed by approximately 5 days, creating savings of 5-20%.

## Conclusion

One of the main advantages of using aggregators to advertise your job postings is that they will list your jobs for free in organic search results. Our advice is to do this first. The newest jobs will always appear nearer the top, so let them run in the organic results for a day or two before you start sponsoring and optimising them.

In the 4 tests described above, we have looked at each level of optimisation in isolation in order to demonstrate their individual effects and benefits. However, these methods produce the best results when combined and working together.

As the UK's first programmatic job advertising platform with integrated AI, ClickIQ combines all of these elements into one effortless optimisation tool. It will typically save you more than 40% of your recruitment advertising spend, depending on the type of roles you recruit for, as demonstrated by the simple spend comparison below.



ClickIQ allows you to effortlessly plug into an extensive network of aggregators. It enables you manage, track and optimise jobs via user-friendly campaign management tools and a comprehensive, customisable analytics dashboard. The platform is SaaS-based and fully maintained/supported in-house by us in the UK, which means no large capital expense or ongoing IT support costs.

In short, ClickIQ makes online recruitment more intelligent, efficient and cost-effective in ways that have never before been possible.

Find out more about how the ClickIQ platform can revolutionise your business at <https://www.ClickIQ.co.uk> or contact us on +44 (0) 203 858 0383 [hello@ClickIQ.co.uk](mailto:hello@ClickIQ.co.uk).